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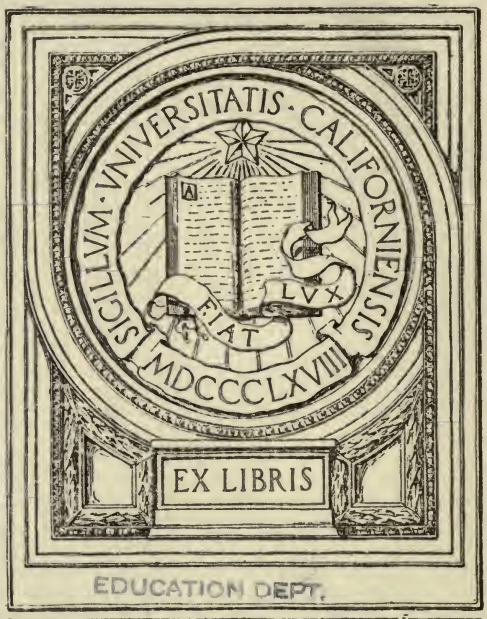
VOCABULARY STUDIES

FRED M. SEELACH, A. M.



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VOCABULARY STUDIES

—by—

FRED M. GERLACH, A. M.

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PREFACE.

The following treatise on Vocabulary Studies was prepared, in the main, as a partial requirement for the degree of Master of Arts at Colorado College, and was submitted for approval in June, 1915. Since that date there have appeared several articles bearing upon the subject; likewise certain additional minor investigations have been conducted by the writer. Comment upon these articles and investigations appears from time to time in this treatise in the form of inter-paragraphical notes. It has been the writer's purpose to bring this discussion on vocabularies up to date.

The parenthetical numbers refer to the bibliography at the end of the treatise. Thus (1) refers to reference number 1, that is, Babbitt, E. H.; Pop. Sci. Mo.; Apr. 1907; 70; 378; A Vocabulary Test.

The experiments undertaken by the writer were, for the most part, conducted during the spring months of 1915. They were carried on under the general direction of the Department of Psychology and Education at Colorado College, Colorado Springs, Colo. The subjects tested were, with a few exceptions, students of Colorado College or of the Colorado Springs High School.

Colorado Springs
April, 1917. F. M. G.

PART I.

INTRODUCTION.

A word represents an idea. The nature of a man's ideas determines the nature of his words. The mind of a man, the mind of a people, is reflected in the language of the man, the language of the people. Good words are begotten by good thoughts; evil words arise from evil thoughts. The source of an idea is at the same time the source of the word to express that idea. Thought and language are inseparable. As a man's character is, such is the nature of his true vocabulary.

An idea is represented by a word; a group or combination of ideas is represented by a group or combination of words. The larger a man's vocabulary, the greater the number of his specific ideas. He who has an immense vocabulary not only has a great number of specific ideas, but also has the possibilities of an enormous number of combinations of words—that is, combinations of ideas. Similarly, for him who has a small vocabulary the number of possible combinations of ideas is reduced to a minimum. This faculty for the combination or grouping of ideas may be called general intelligence. Clearly, the vocabulary furnishes us the best basis for the measurement of general intelligence.

The child, immediately upon entering the world, makes his presence known by a cry. This cry is merely a reflex act, induced by the new and strange conditions to which the vocal apparatus of the child

is suddenly and rudely subjected. But the cry soon becomes differentiated, assuming different proportions and varied intonations to express different mental states. Later, with the coming of definite ideas we find the entrance of words to express them. The crys and babblings assume a more articulate character. The child's vocabulary is being established.

Speech is not inherited. To some degree it is probably instinctive. The general neural paths favorable to the development of speech are formed in the embryonic stage. But the actual development of speech must begin after birth. Language arises with ideas. Why does the new-born child not talk? The psychological reason is that he is devoid of ideas. He really has nothing to say. There is also a physiological reason. Even though the child had ideas he could not express them vocally, for his speech-apparatus is as yet too imperfectly developed. Not only must the child acquire ideas, but he must also acquire the motor co-ordinations to express those ideas—those otherwise unspoken words. On the cortical surface of the brain, just over and slightly back of each temple, lies a small area known as the convolution of Broca and recognized by psychologists as the speech center. All about this convolution there is a series of highly complex motor centers which utilize secondary motor centers in the face, setting them to work in varying combinations. Next to the motor centers for the face, in the anterior-central gyre, we find the highly differentiated motor centers for the hand (37). Thus we find that the motor centers for the face and for the hand are closely related to those having to do with vocalization. Witness facial expression and the universal use of gestures. An idea, a word, may be expressed by means other than vocal.

Language has been defined by Broca as, "The faculty of establishing a constant relation between an idea and a sign" (36). Yocum says, "The number

and kind of words in a teacher's vocabulary largely determine his thinking by limiting or increasing the amount of experience which he will retain and the possibility of its being related to other experience" (63). The application of the thought expressed in this quotation need not, as is quite evident, be confined to teachers. Rankin makes the following statement: "Whether the relationship be that of cause to effect, of effect to cause, or of mixed cause and effect, the fact is very evident that broad scholarship, and even mere general culture, is always accompanied by the mastery of a wide vocabulary" (51). It is asserted by Tracy that "Thought itself cannot attain to any great degree of generality without the aid of language. Thought and language are mutually helpful, and conduce each to the development of the other" (57). And Beyer says, "It can not be doubted that thought and language are inseparable. It does not greatly matter whether one puts thought, the egg, or language, the hen, first. No language, that is, no symbols, no thought; vague, blunderbuss, generic symbols,—vague, blunderbuss, double-pointed thought; sharp, fine, distinct words, sharp, fine, distinct thought" (8). Additional statements of a similar nature might be quoted. But wherefore? A little introspection should be sufficient to convince anyone of the relation between idea and word—of the important connection vocabulary bears toward thought.

It is the writer's purpose in this brief treatise to confine himself almost wholly to the study of actual vocabularies, making certain observations concerning their growth and size, the relation between vocabularies and arbitrary grades as found in schools and colleges, age and sex influences, and the like. First the results attained by a number of other persons interested in this same line of work will be presented. Then will be shown the results of certain vocabulary experiments carried on by the writer, in conjunction with Dr. J. V. Breitwieser, at Colorado

College. This will be followed by comparisons, comments, and conclusions. And finally, as an appendix, will be found the actual vocabulary test as it was used in the Psychological Laboratories of Colorado College.

PART II.

GENERAL DISCUSSION.

In few fields of research do we find such a discrepancy of opinion as we find among the various guesses, estimates, and calculations in regard to the size of vocabularies. On the one hand eminent educators adhere to the belief that an average person has a vocabulary of only several hundred words, at best perhaps a thousand. On the other hand equally eminent educators assert that man has at his command any one of a hundred thousand words—or perhaps even twice that number. Why has there been such a difference of opinion, such a diversity of conclusions? Largely because there has been such a diversity of method in arriving at these conclusions. Many of the more or less absurd theories and opinions advanced by so-called "investigators" of vocabularies could scarcely have been reached by any other method save that of pure and exceedingly simple guesswork. Nevertheless we find that even those students of vocabularies who have gone about their investigations thoroughly and systematically arrive at conclusions not at all in harmony with each other. Perhaps such a state of affairs is to be expected. For as yet comparatively little of a definite nature has been done in the study of vocabularies. In view of this fact it is extremely difficult to make reliable generalizations, and to arrive at correspondingly trustworthy conclusions. It is regretable that a subject of such wide-spread interest and such uni-

versal importance has been so neglected. Accurate measurements for physical power are common; accurate measurements for mental capacity are unknown. At best, measurements of intellect are but approximations. This, however, need not deter us in our efforts to discover something further to add to the meagre knowledge which we have concerning the human mind; it need not hinder us in our search for some system of measurement, however imperfect it may be, which will enable us to determine to even a slight degree the scope of human intellect. And when we consider the fact that even the most accurate physical measurements are relative, our problems concerning the intellect assume a less forbidding aspect. However meagre the attempt may be, it is surely worth while to make an honest effort to throw some light upon the subject—to aid in the unraveling of one thread of the great tangled skein.

Let us pause for a momentary inspection of a few of the highly interesting, though varyingly instructive, guesses and more or less haphazard estimates as to the number of words comprising a vocabulary. Then we shall review briefly a number of the actual vocabulary tests which have been made by various men and women.

To quote from Brown: "For the past two or three decades many books on the English language, English composition, and public speaking have 'estimated' the working-man's vocabulary at five or six hundred words, and the college student's at one thousand or twelve hundred. In a public address only a year ago an officer in one of our larger universities declared that 'the average senior' in that institution 'did not employ more than eight hundred or a thousand words in all the writing and speaking involved in the various activities of his life' "(13).

Dean Alvord, according to Rankin, stated that the working men of his acquaintance used scarcely two hundred words in all. Rankin is also authority for the statement made by a well-known American edu-

cational writer to the effect that a man may converse very well with a vocabulary of only seventy-five words! Rankin offers the following comment: "Ridiculous as is such a statement, the ever-unscientific public gulps it down with avidity and sighs comfortably in the assurance that it has seventy-five usable ideas all tagged with their proper word-signs. It does not occur to the public—who prefer ideas and clothes both ready-to-wear—that the baby of eighteen months is usually in good command of more than seventy-five words, yet is not able to 'converse very well' "(51).

Max Muller is authority for the statement that an English clergyman declares the laborers in his parish did not use over three hundred words(45), while dean Farrar has stated that the English laborers carry on their conversation with not more than one hundred words(18). What a lively conversation it must be!

Doran claims to have formed the acquaintance of a parrot that could speak 59 words—four-fifths as many as are required, according to our noted "educational writer" whose name has been withheld, in order to "converse very well"(18). And, if we may believe Gardner, the anthropoid apes are not far behind; for according to his assertion apes have a vocabulary of 25 or 30 words(18). It is remarkable how little advanced beyond the simian stage certain persons rate the lower strata of human society.

A New York paper once made the assertion that the number of words actually needed to get along in business was 3,500(18); while according to Beyer, "In a reputable magazine a few years ago the statement was made that three hundred words were enough to enable the average person to carry on all the business of life." Beyer is inclined to think that the "working dictionary" of a cultured person must comprise about 4,500 to 5,000 words(8).

Baird says the total number of words needed by a tourist in a foreign country is 650. This is intended to indicate merely the number of words actually needed to get along with (2).

George P. Marsh about forty years ago stated that few writers or speakers used as many as 10,000 words, ordinary persons using only about 3,000 or 4,000. He says that Shakespeare used only 15,000 words in his literature, while Milton used only 8,000 (40). These statements made by Marsh have been disproved by later writers. Dr. Edward S. Holden declares that Shakespeare used over 24,000 words, and Milton, in his poems alone, used 11,377 (27). Doran found in Milton's works 12,800 different words. He further claims that Cowper used 11,284 words and Shelley 15,957. In Tennyson's works he found a total of 10,574 words, excluding all proper names not found in the dictionary. Only a few of Tennyson's minor poems and only a few of his translations are included in the Concordance from which this calculation is made (18).

In the French, so Dr. Edwin S. Du Poncot asserts, Victor Hugo used in Notre Dame 27,000 words; Du Poncot estimates that in all of his works Hugo must have used 38,000 different words (18). It is said that Victor Hugo actually created as many as fifteen hundred new forms of expression (54).

Several authors agree that the vocabularies of intelligent, cultured people, especially those of literary taste, contain from 25,000 to 30,000 words (18). Professor E. A. Kirkpatrick says that for ordinary reading one needs from 6,000 to 10,000 words. He estimates that a citizen of the United States having a common school education would know about 10,000 words, and a well-read college graduate and those who have pursued a university course would know from 20,000 to 100,000 (35). These theories advanced by Kirkpatrick almost a quarter of a century ago have been partially confirmed by actual

vocabulary tests conducted by him in more recent years (33).

We are somewhat prone to believe that foreign languages, even the most modern, have a much smaller number of words than are to be found in the English. Dr. R. J. Kellogg, however, is of the opinion that the vocabularies of such languages as the French, German and Spanish are practically as large as that of the English. There is scarcely a word in the English that does not have its equivalent in those languages, and almost every thought of an Englishman may be expressed by a Frenchman, a German, or a Spaniard (18).

There is also a general belief that the number of words in the language of a primitive people is very small. The vocabulary of an aborigine is supposed to be remarkable chiefly for its meagerness, verging to non-entity. Chamberlain, however, furnishes us with data relating to the number of words in use among various Indian tribes. This data is based upon dictionaries of the Indian languages. The total number of words in each of the various tribal languages considered varies from 10,000 to 40,000, the average being well over 20,000 (14). These estimates are probably too low, for the dictionaries were very incomplete. About eight or ten tribal languages were considered. A. G. Morice in his studies of the Dene languages says the Carrier tribe's vocabulary contains 150,000 verbal terms (44). It might likewise be well to note that in the Chinese language, which has a separate sign for each word, the total number of characters is usually estimated at about 25,000; however, considering as totally different those characters to which a stress mark gives a different meaning, other estimates place the number at 260,000 (42).

Estimates of child vocabularies present as interesting a disagreement as do those for the vocabulary of an adult. The average person, says Beyer,

guesses a two-year-old child's vocabulary to be about fifty words. Many claim that it does not exceed twenty-five; while a few persons are generous enough to give the child credit for knowing two hundred words at two years of age(8). Whipple once asked two of his friends how many words an ordinary three-year-old boy could use. The first of his friends ventured to place his guess at 150; the other greeted this estimate with derision and declared that fifty words would cover the vocabulary of any three-year-old child(60). Laurie, based on the authority of Max Muller, claims, in his "Lectures on Language and Linguistic Methods", that "In the child up to the eighth year the range of language is very small; he probably confines himself to not more than 150 words"(60). On the other hand we find Luckens reporting the assertion of Dr. Elmer Gates to the effect that his boy knew 11,000 words at the age of twenty-one months!(39).

It is evident that from such a wealth of diversity of opinion as has been presented thus far, little of a definite nature can be determined concerning the actual size of a vocabulary, whether it be the vocabulary of an adult or that of a child. In order to obtain adequate conclusions we must seek further than mere guesses, and estimates without foundation. Actual vocabulary tests, and studies in vocabularies, must be considered. In spite of the fact that these tests and studies produce widely differing results it may be possible, by conservative generalizations, to arrive at some comparatively trustworthy conclusions.

At what age does a human being begin to speak? Tracy tells of a child, a girl, who when only fifteen days old had a peculiar sort of cry for expressing her desire to be fed. In another case the feelings of hunger, cold, pain, joy, and desire were expressed by different sounds before the end of the fifth week (58). Professor Whipple claims that his son, Richard, said "Mamma" at the age of seven and a half

months; Whipple thinks, however, that this may have been mere accident(60). Dr. E. C. Hills says his daughter, Ruth, used six words when eight months of age(26). George C. Brandenburg in the study of his child found that the first word she pronounced with evident understanding was "Bye-bye" at ten months(11). Beyer, in commenting upon the language of his son, Thomas, claims that at the end of one year after birth the child's vocabulary "consisted of not more than 20 symbols, of which about 10 were English; the others, the language of infantry, more or less conventionalized in his own usage" (8).

The age at which speech begins varies in different individuals. In some, articulate language commences during the sixth or seventh month; others can not speak a single word when they are ten months or a year old. Girls usually learn to talk at an earlier age than do boys. Even after speech has begun its development varies greatly in different individuals; with some the progress is very rapid, while with others it is exceedingly slow. These are some of the explanations why tests of child vocabularies carried on by different people with different subjects so largely fail in conformity of results. It is also well to note that the number of individuals considered is too small to permit satisfactory generalizations and conclusions.

The following method used by Professor and Mrs. Guy Montrose Whipple in their study of the vocabulary of their three-year-old son will serve to illustrate a very practical manner in which the study of a child's vocabulary may be undertaken. This method, or one very similar to it, has been followed by a number of the most reliable contributors to this phase of vocabulary study. They proceeded thus: Twenty-six blank sheets, one for each letter of the alphabet, were prepared, and for ten days prior to lary child's third birthday anniversary the words him were recorded. To this list were added

those words which it was known he had used previously, in each instance making sure that the words had not been forgotten by artificially producing an occasion for their use. Finally, a number of words were selected from several child's vocabularies that had been published. These words were similarly tested before they were added to the list. Plurals formed regularly were excluded; other inflected endings, grammatical variants and compounds, such as *tall, taller, tallest,* and *go, going, gone,* were included. Many students of child vocabularies do not include inflections as distinct words. Whipple makes the following comment: "It seems unnecessary to point out that, psychologically speaking, related forms like these are just as much distinct acquisitions for the child as are totally different words such as tall and short; the principles of exclusion that have been adopted by some compilers of children's vocabularies, notably Holden, may be grammatically, but they are not psychologically, justifiable" (60).

One of the most recent, as well as thorough, investigations in child vocabulary was the one carried on by Beyer, in the study of his son, Thomas Lynn Beyer, during the twenty-third and twenty-fourth months. Beyer used the same method as employed by Whipple (60), with the important exception that inflected forms were treated as distinct words only when there was a radical umlaut or internal change, as in *foot* and *feet.* Present participles were not included. Using this method, the child's vocabulary at two years of age was found to consist of 771 words. At the end of one year after birth, as has been previously mentioned, the child had command of about 20 symbols. At seventeen months this number had been increased to 160—an increase of 700 per cent in five months. At the end of two years his vocabulary amounted to 771 words, this being 38 times the number at one year, and almost five times the number at seventeen months. The

actual number of words learned from the seventeenth to the twenty-fourth months was more than four times as great as the number learned from the twelfth to the seventeenth. Beyer comments thus: "If he should merely maintain the same rate of increase during his third year, an eventuality altogether to be expected of a normal child in health, 1055 words will be added during the year, making a total of 1826, a number astonishingly close to the 1771 words actually recorded by Professor Whipple in the use of his three-year-old son. If it is true, as Professor Whipple says and as child-psychology regularly assumes, that the period between the second and third birthday witnesses the greatest expansion in thought-symbols, then we must place the probable limit much higher, possibly from 2200 to 2500. As a matter of fact, the first two weeks after the child's second anniversary, he learned about eighty words, an acceleration nearly twice as great as that of his former average; and during the 25th month, nearly two hundred, almost trebling the former rate" (8).*

Dr. E. C. Hills made a very thorough study of the speech of his daughter beginning on the second anniversary of her birthday and continuing his observations for a period of ten days. Only the words actually used by the child during that period were recorded. Some objects were pointed out and she was asked to tell their names, but in no case was a name given to her while the test was in progress. Furthermore, all the words used by the child during the period under consideration had been acquired by her without effort on the part of her parents, with the exception of the cardinal numerals from 1 to 10 and the names of some of the common colors. When eight months old the child had used six words, though, as might be expected, her pronunciation

*Later studies by Beyer have an important bearing on the above statements. Cf. page 26.

was imperfect. At two years of age, during the period under observation, she used a total of 321 words. Dr. Hills classifies the vocabulary as follows: proper nouns, 9; common nouns, 173; personal pronouns, 4; limiting adjectives, 26; descriptive adjectives, 23; verbs, 59; adverbs, 11; conjunction, 1; prepositions, 8; exclamations, 7. Of the 321 words used by the child, 228 were of one syllable; 76 of two syllables; one of four syllables; and 16 compound. Dr. Hills is of the opinion that the child used ten imperative sentences to one indicative sentence (26).

At the age of three the son of Professor and Mrs. Whipple had, according to the tests undertaken by his parents, a vocabulary of 1771 words. His first word had been pronounced at seven and a half months; four words were used at eleven and a half months; fifteen words constituted his vocabulary at the end of the first year. On his second birthday the attempt to record the words used by him was given up, for in the first fifteen minutes, when no one talked to him, he used 154 words, 98 of which were different. As is quite evident, vocabularies depend largely upon interest and environment. Thus we find that in this child's vocabulary, out of a total of 1771 words the number which had been acquired in connection with eating amounted to 215—over 12 per cent of the whole. The total vocabulary was classified thus: nouns, 993; verbs, 391; adjectives, 209; adverbs, 89; pronouns, 33; prepositions, 24; interjections, 24; conjunctions and articles, 8 (60).

According to Brandenburg, "The percentages of the different parts of speech (if one counts the verb forms printed in small capitals) in the dictionary are about as follows: nouns 48.4 per cent; verbs, 27.5 per cent; adjectives, 18.6 per cent; adverbs, 4.9 per cent; pronouns, .2 per cent; prepositions, .1 per cent; interjections, .1 per cent; conjunctions, .05 per cent" (11). These results were obtained

through the examination of several of the leading dictionaries.

Brandenburg found that at the age of three his daughter had a total vocabulary of 2282 words. Of the entire number, a trifle over 50 per cent were nouns. The vocabulary was divided into two parts, the first, containing 2099 words, being classified as the conscious vocabulary and the second, comprising 183 terms, being classified as the sub-conscious vocabulary. The latter classification was made up of words which the child had been known to use, but which had either been forgotten or could not be recalled because of lack of proper environment. Brandenburg found that of every eight nouns learned by the child, one was "pigeon-holed", or became a part of the sub-conscious vocabulary, while of the verbs only one out of every 33 was thus stored away. In one day the child used a total of 11,623 words, 859 of which were different. Thus, in one day she used 37.6 per cent of the total number of words at her command. Brandenburg not only lists the actual vocabulary of the child, but also publishes her entire conversation for one day. The total number of sentences used during the day amounted to 1873, the average number of words per sentence being six and a fraction (11).*

Mildred Langenbeck reports the investigation of an "unusually precocious child" who at the age of five had a vocabulary of 6837 words. It is said that when the child was three and a half years old her uncle taught her Herbert Spencer's definition of life,** and that though months often elapsed between her intervals of saying it she never forgot it.

*The above study by Brandenburg was later continued during the fourth year of the child's life. Cf. pages 26 and 27.

**"Life is a definite combination of heterogeneous changes, both simultaneous and successive, in correspondence with the external co-existences and sequences." *Herbert Spencer.*

The following incident is reported as having occurred when the child was aged four: once, becoming very angry at the dust, she exclaimed, "I should like to kill the dust." When asked how she could kill it she replied, "Very easily, pour a little water on it." A series of tests at the age of five conducted by the Binet-Simon method gave her a mentality as that of eleven years. She failed on questions depending upon teaching and experience, but excelled in those dealing with natural observation. She coined many words as occasion for their use arose. Many of the child's ancestors were distinguished men and women. On both sides her family were people of more than average capacity and cultivation. When sixteen months old the child had a vocabulary of 229 words. Of the 6837 words in her vocabulary at five years, 56.8 per cent were nouns (38).

The above reports of studies in child vocabularies will serve to illustrate the general nature and scope of such investigations. For the remainder of the studies of child language of which we have record a brief summary of the results obtained will be sufficient. For the most part, these results will be merely tabulated. A few of the studies, however, will bear more specific mention.

Viola Olerich, the "famous baby scholar," at two years knew 2,500 nouns according to actual records, and it was judged that she knew at least 500 more (47). Figuring on the basis that nouns amount to 60 per cent of the entire vocabulary of the child the total number of words known by Viola Olerich at the age of two would be 5,000.

Gale reports a boy of two and a half years to have used in one day a total of 9,290 words, 751 of which were different, and another child of just two years who used a total of 10,507, of which 803 were different (20). Sanford Bell found that his child of four years and nine months uttered a total of 14,996 words, while one of three and a half years used 15,230, in one day (7).

Tracy (58) found that in testing the vocabularies of a number of children, the total number of words considered being 5,400, nouns formed 60 per cent of the entire vocabulary. Other authors agree that the number of nouns in a child's vocabulary always exceeds 50 per cent of the total number of words.

Kirkpatrick makes the assertion that the number of words used by a two-year-old child varies from a few to a thousand. The average he believes to be about 200 to 400(34). In close agreement to this assertion is the following statement by Whipple: "In the twenty-odd published vocabularies, we find that children from 16 to 19 months are using from 60 to 232 words, that two-year-old children are using from 115 to 1227 words, and that the vocabulary increases rapidly from that time on. It is perfectly safe to assert that the average three-year-old child makes use of 1,000 words. This holds true at least for the child who has an ordinary quantum of curiosity and a normal tendency toward linguistic imitation and who is in daily contact with parents or older children who are ready to name situations for him as fast as they appear" (56).

In order to facilitate the study of child vocabularies the following tabulation has been prepared:

TABLE I.

Child Vocabularies.

Authority.	Age of Child.	Vocabulary.	Reference.
Whipple	7.5 m.	1	60
Hills	8 m.	6	26
Tracy	9 m.	9	58
Whipple	11.5 m.	4	60
Tracy	1 y.	4	58
Tracy	1 y.	8	58
Tracy	1 y.	10	58
Whipple	1 y.	15	60
Beyer	1 y.	20	8

(Continued on next page)

(Table I, continued)

Jegi	16 m.	75	30
Langenbeck	16 m.	229	38
Tracy	17 m.	35	58
Beyer	17 m.	160	8
Hall	17 m.	232	25
Jegi	18 m.	60	30
Dewey	18 m.	144	17
Nice	18 m.	145	46
Dewey	19 m.	115	17
Tracy	19 m.	144	58
Tracy	21 m.	177	58
Tracy	22 m.	28	58
Tracy	22 m.	69	58
Tracy	23 m.	136	58
Tracy	2 y.	36	58
Gale	2 y.	115	21
Tracy	2 y.	139	58
Doran	2 y.	161	18
Holden	2 y.	173	28
Tracy	2 y.	263	58
Hills	2 y.	321	26
Preyer	2 y.	397	49
Holden	2 y.	399	28
Moore	2 y.	475	43
Holden	2 y.	483	28
Gale	2 y.	578	21
Gale	2 y.	614	21
Beyer	2 y.	771	8
Humphreys	2 y.	1121	29
Jegi	2 y.	1227	30
Olerich	2 y.	5000*	47
Tracy	25 m.	250	58
Tracy	27 m.	171	58
Tracy	28 m.	677	58
Tracy	30 m.	327	58
Salisbury	32 m.	642	52

(Continued on next page)

*Estimated.

(Table I, continued)

Gale	3 y.	1176	21
Nice	3 y.	1205	46
Whipple	3 y.	1771	60
Brandenburg	3 y.	2282	11
Mateer	4 y.	1020	41
Nice	4 y.	1870	46
Doran	5 y.	1400	18
Langenbeck	5 y.	6837	38

Table I presents the size of various child vocabularies, the subjects ranging in age from 7.5 months to 5 years, and the vocabularies ranging in size from one word to 6837. Owing to the difference in age at which speech first appears, an attempted generalization in regard to the size of vocabulary before the age of two is not justifiable. Even at the age of two there is necessarily a great divergence in the size of the vocabulary. This is due partly to the fact that different children begin to talk at different ages; it is also due to the fact that children are not endowed with equivalent intellects, and some learn much more rapidly than others. Obviously this state of affairs continues throughout life. Therefore, in any group of considerable size, composed of persons of the same age selected at random, regardless of what that age may be, we can not expect a very close agreement in the sizes of their vocabularies. In actual number of words the variation at the age of two is doubtless smaller than at any subsequent age; for variation in terms of percentage of the entire vocabulary the reverse is probably true.

Omitting as very unusual the five thousand word vocabulary of Viola Olerich, we find the average vocabulary of the remaining sixteeen two-year-old children recorded in Table I to consist of 454.56 words—approximately 450; the median is 398, and the mean variation 260.9. The range is from 36 to 1227. Unfortunately, the data at hand for the remaining ages of infancy is too slight to warrant the

reliability of generalization. Nevertheless, in the four vocabularies recorded for three-year-old children there is a certain general uniformity of size which may justify the taking of their average. The resultant is 1608.5—a number which seems very reasonable. Taking 1600 as the vocabulary at three years of age and 450 as that for two years, the increase in one year is 256 per cent; in other words, the vocabulary at three years should be, roughly speaking, about three and one-half times as large as at two years.

Note: Since the compilation of the foregoing table and statistics several magazine articles have appeared which have an important bearing on the subject. Beyer, who furnished such admirable data concerning the vocabulary of a two-year-old child, has continued his investigations during the third year and presents the results of this study in the Educational Review, Dec., 1916(9). It was found that the child, who at two years had a vocabulary of 771 words, acquired during his third year 1297 verbal symbols; thirteen of the words previously known had gradually been dropped, "the defunct language of infantry." This left a remainder of 2055. However, this estimate excludes about 200 "questionable words" which if added would bring the total to 2255. Using the more conservative estimate of 2055 as the vocabulary at three years, we find an increase of 166 % over the vocabulary at two years; if we take the larger number, 2255, the increase is 193 %. In either case the percentage of increase is considerably smaller than the suggested increase of 256 %. However, it should be noted that Beyer's child at two years of age had a much larger vocabulary than the average for the two-year-old child as ascertained from the table. It is not to be supposed that the child with a large vocabulary would show as great a yearly increase in terms of percentage, though in actual words his gain would probably be somewhat more than that of the child with a more meagre store of verbal symbols.

In an article in the Pedagogical Seminary for March, 1916, George C. and Julia Brandenburg give the results of a continuation in the vocabulary study of their daughter during the fourth year(12). At four years of age the child knew 3915 words, including regular variants except noun plurals; and 3061 words excluding all except irregular variants. At three years of age the child's vocabulary, including variants, totaled 2282; excluding variants, 2008. This gives an increase during the fourth year of 71 % in the former case, and 52 % in the latter.

At three years of age the variants constituted 12 % of the entire vocabulary; a year later they amounted to 21.8 %. A comparison between the third and fourth years in regard to parts of speech is shown in the following table:

	Regular variants incl'd				Regular variants excl'd			
	No. of words		Per cent		No. of words		Per cent	
Age	3	4	3	4	3	4	3	4
Nouns	1171	1728	51.3	44.1	1171	1728	58.0	56.4
Verbs	732	1510	32.0	38.6	465	716	23.0	23.4
Adjectives	198	427	8.7	10.9	191	374	9.8	12.2
Adverbs	98	150	4.3	3.8	98	144	4.9	4.7
Pronouns	36	43	1.6	1.1	36	42	1.8	1.3
Prepositions	20	24	.8	.6	20	24	1.0	.8
Interjections	15	19	.6	.5	15	19	.8	.6
Conjunctions	12	14	.5	.4	12	14	.6	.4
Total	2282	3915			2008	3061		

Brandenburg claims that from a study of 2000 school children of various grades he has ascertained that children in the public schools build up their vocabularies at the rate of approximately 1400 words per year, exclusive of variants. It would be of interest to know the increase rate inclusive of variants; and also to know the per cent of increase from year to year.

Bateman, in the June, 1916, issue of the Pedagogical Seminary, discusses the language of three children at the same age(5). All three children were girls, two, J. and A., being sisters and the other, D., a cousin. The appearance of the first word in the three cases was A., ten; J., ten and one half; and D., eleven months. The vocabularies at one year comprised D., 8; A., 9; and J., 10 words. Bateman cites eight cases of one-year vocabularies, the average number of words being 9. At two years one of the three children in consideration had a vocabulary of 497 words. At twenty-eight months the vocabularies excluding proper nouns and inflections, were: A., 628; J., 405; and D., 308. Including proper nouns and inflections, the vocabularies for the two sisters were: A., 779; and J., 488. Data concerning three other vocabularies at 28 months is given showing totals of 677 (cited in Table I of the present treatise), 451 and 345 words. The average for the six vocabularies at 28 months is 469. Bateman claims the average number of words at two years for 20 vocabularies is 498; at three years for 9 vocabularies 1,515. Authorities for these statistics are not cited. These averages for the two-year and three-year vocabularies show a remarkably close approximation to the averages obtained from Table I of the present discussion. If an average is attempted from the two groups of two-year and three-year

averages (the group cited by Bateman and the group presented in Table I), though such an average of averages would doubtless by no means be exact since there are probably repititions in the two groups, the resultant gives a vocabulary of 479 words for the average two-year-old child, and a total of 1544 words for the three-year-old child; showing an increase of 222 % from the second to the third year. Is it then too much to say that during the third year the normal child may be expected to show a gain of from 200 to 250 per cent in vocabulary?

For the remainder of this part of the treatise which deals with investigations carried on by others in the field of vocabulary study, owing to the nature of the data at hand, recourse must be had very largely to broad generalizations. A few specific instances will be mentioned, for the most part without comment, and such generalizations as are deemed advisable will be presented.

Dr. Peter Roberts said the average vocabulary of a child of six or seven amounted to only 300 or 400 words(56). Other writers have made somewhat similar statements. In view of the data which has been presented concerning the vocabularies of children during infancy, and especially the conclusions reached in the case of the two year vocabularies, such statements as that of Dr. Roberts may be discarded without further consideration.

In connection with the study of children who are just entering school, and even in regard to those who are a little more advanced but still in the lower grades, it is interesting to note the number of different words used by some of the textbooks. The average primer comprises a vocabulary of between 300 and 400 words. A few contain approximately one thousand, but these are exceptional. Thus the six-year-old child, in order to qualify for promotion, must learn to recognize in print 300 or 400 words. This number obviously does not comprise his entire vocabulary—perhaps not even one tenth of it. For when the child is beginning to read and until he has mastered the system of alphabetical and syllabical

combinations to form words, he certainly is familiar with a comparatively enormous number of terms which he would fail to recognize in print.

Jean Sherwood Rankin found a total of 5,965 different words, including 909 proper names, in a popular and modern textbook in United States history (51). In order for the eighth-grader to study intelligently this particular book he must obviously know the great majority of these words. It should be born in mind that textbooks for different subjects all have, after a fashion, their own special vocabularies. Likewise we must remember that a considerable number of words which, even in their printed form, are familiar to the eighth-grader do not appear in any of his textbooks.

To quote from Katrina Koch: "Every educator knows, that by his fourteenth year the boy has learned, understood and remembered lists of words, varying from fifteen to twenty thousand. And of these, most teachers realize, to their chagrin, that they succeed in making him use not over eight hundred or a thousand" (36).

A study of the reading vocabulary of three children who had attended school one and a half years was undertaken by Myrtle Sholty. She took all the readers which the children had read since entering school and used the words of these readers as the basis of the vocabulary test. All the words which could be built up or worked out by sound were called phonetic words. Though the children had had daily drills in phonetics for twelve months, each one knew a greater number of sight than phonetic words, showing that they still depended very largely upon the memory. Of the three children, one, designated as A, was supposed to be the best reader, B medium, and C the poorest. Out of a total of 1,588 words known in context were: B, 1,438; A, 1,392; and C, 1,309. Results for words recognized when seen on the instant, that is through the tachistoscope, were:

C, 1,009; A, 977; and B, 798. The results for words worked out are given as: B, 670; A, 412; and C, 315. Thus C was the most dependent reader because she could build up fewer words, and B was the most independent. C is said to have improved rapidly and when the test was completed was the fastest reader of the three. A, who was supposed to be the best reader, ranked only second in each of the tests. It is interesting to compare the number of printed words known by these three children, who had attended school one and a half years, with the number of words which are, in general, found in a primer. Progress becomes more rapid as the child advances (53).

Doran reports a boy, nine years old, who had a vocabulary of 6,031 words. The boy was bright in many respects, but had not been to school very much. He was in the third grade. Doran's son, Edwin, at ten years of age could define at least 10,000 words, and when he was thirteen he could define 18,000, according to tests carried on by his father. The youth had read a great deal, and had had considerable practice in vocabulary work. At thirteen he had studied one year of Latin. Doran believes that Latin and Greek aid greatly in the enlargement of the English vocabulary (18).

Doran worked mainly with students in schools and colleges. His effort was to ascertain not the number of words that had actually been used in oral or written speech, but the number of words the persons knew or could use intelligently. In every case his results were attained by oral or written definitions. He included all proper names and variants found in the dictionaries which he used, saying, "As there seems to be some confusion in vocabulary tests as to what constitutes a word, let it be understood I have followed the dictionaries in this respect. I have counted what they have counted, and I have included what they have included." Some of his earlier investigations were based upon Webster's In-

ternational, the Academic, or the High-School editions, while his later studies were conducted by the use of the Century and the Standard dictionaries. His method was to select a number of words, usually 1,000 or more, taking all the words of each page, except such unusual words as no one would be likely to know, and selecting the pages either at random, or, as was more often the case, taking them in a certain definite order, as every twenty-fifth or every fiftieth page (18).

By class tests Doran found that the pupils of the sixth grade in one school averaged 4,192 words while in another they averaged 11,634; in the same two schools respectively the eighth-graders averaged 7,937 and 17,138. The pupils of the latter school were somewhat older than those of the former. For the most part, Doran's results will simply be tabulated in a general way further on in this treatise; and a few solitary tests which do not admit of adequate generalization will be given specific mention (18).

A certain Minnesota superintendent tested the vocabularies of four eighth-grade pupils by having them go through their small High-School dictionaries, counting word by word all that they felt sure they knew and might have used. Three of the four reported that they knew between nine and ten thousand words. The fourth estimated for himself nearly fifteen thousand. Jean Sherwood Rankin, in offering this report, comments thus: "These figures tally well with the reports upon vocabularies published by the one or two lone explorers in the field of high-school vocabularies, and lead us to the conclusion that the eighth-grade student who completes his work successfully must possess from ten to fifteen thousand words" (51).

Professor E. A. Kirkpatrick conducted a series of tests among children of the grades, as well as among high school and college students. His method is

clearly shown by the following quotation: "When a student began, say on page 2, and counted all the words in bold-faced type and the number of these known on every fiftieth page, and then did the same beginning with page 20, the results were so nearly the same as to convince me that the method was fairly accurate. Some preliminary tests were then made that showed that a hundred words taken by chance from various parts of the dictionary might serve as a fairly accurate measure of the size of one's understanding vocabulary . . . . . The author now considers that the best list of words is obtained from Webster's Academic Dictionary (which contains about 28,000 words on 645 pages), by taking the first, second, or last word, or any other definite word on every sixth page. For general purposes and for all ages this is probably better than to take a hundred words from an unabridged dictionary which contains so many various and obselete forms of the same words, along with rare words, and technical terms not found in the smaller dictionary. Estimates based on words from the academic dictionary give less than half as many words in the vocabulary as those based on data from the unabridged, but they are more representative of fundamentally different concepts.

"The method of using the test was to place the printed list before the subjects and ask them to mark the words that they knew with a plus (+) sign, those that they did not with a minus (—) sign, and doubtful ones with a question mark (?). The tests, which numbered about two thousand, were made chiefly upon pupils from the fourth grade up through the high school and university, although a few were made upon younger children. Control tests showed that if the same test was given orally, there was some difference in the words marked as known and unknown. This difference was of course very great in the second and third grades, where a few tests were made, and became less with age, yet

it usually amounted even in the case of adults to from one to three per cent. In a few individuals the difference was quite marked" (33).

Kirkpatrick found the individual differences in size of vocabulary to be very great, some ninth grade children falling to the rank of second grade children, while some in the third or fourth grades ranked with the average of those in the ninth grade or high school. In general, he found that those students who had read extensively ranked higher in size of vocabulary than those who had read little. He announces that in his own classes where students were ranged in three grades according to the number of words which they knew in one list, other lists of words similarly selected resulted in 60 per cent to 80 per cent of them being again in the same grade. None changed from the lowest to the highest of the three classifications (33). The results of Kirkpatrick's research will be tabulated later.

Another form of vocabulary test was that conducted by R. W. Brown. Six members of the freshman course in English at Wabash College were the subjects for this investigation. Each student carried small cards with him at all times and endeavored to catch all the words he used in ordinary speech and writing. The following classes of words were thrown out: all which were merely inflected forms of other words on the list; numbers, both cardinal and ordinal; pronouns and demonstratives; nouns used only as proper nouns; extremely technical terms; all except one word from each group of words obviously related in their origin; all negatives in *un* and *in* except where only the negative form of the word exists, or where the positive is rare; and finally, all words in *re* and *dis* where the meaning could be readily gathered from the definitions of the root word and the prefix. In spite of such strenuous efforts to avoid any possible over-estimation, the total number of words—we might almost say words entirely without relation to each other—in ordinary

use by each of the several students who performed the experiment was found to be: 2,970; 3,190; 3,920; 4,510; 4,550; and 4,560. The students varied in age from 17 to 21 years. Their class room records ranged from the highest to the lowest. The words themselves "represent all the variety of interest which one would expect to find in a group of young men who are beginning their college course" (13). Although this particular experiment is of little value as regards the total number of words in a vocabulary, nevertheless it is of interest in that it gives us some inkling as to the number of words in ordinary individual usage—a number unexpectedly large, especially when we consider the enormous number of words which were rejected in this test.

Another interesting test was that carried on by Barnes with six freshmen and four upperclassmen at De Pauw University. Without having given them any previous intimation as to what he desired of them, Barnes called these students into his office and told them to write down all the words they could think of in two hours. The results were: Freshmen, men, 1,114, 1,596, 1,789; women, 847, 948, 1,230. Upperclassmen, men, 1,239, 1,464; women, 1,489, 1,573. At the end of the two hours every student was still writing rapidly and insisted that he had by no means exhausted his supply. Many of the commonest words of every-day life had been omitted (4).

E. H. Babbitt employed a vocabulary test, a little different in detail, but essentially the same as Professor Kirkpatrick's, to find the number of German words which could be defined by students when they entered the second year's work in the subject at college. Some of these students were admitted on examination. It was found that the vocabulary of those who could pass such an examination was never less than 2,000 words, ranging from that to 5,000. The mark received on the entrance examination was

in close relation to the extent of the vocabulary. The test was repeated at the end of the year, the results showing that the vocabularies now ranged from 5,000 to 12,000. The marks on the final examination at the end of this year's course were also in close relation to the extent of the vocabulary. Babbitt tried this plan for several years, and always got comparatively uniform results (1).

Later, Babbitt extended his investigations to the English language. He used an unabridged dictionary containing over 100,000 words. The majority of the college sophomores upon whom he tried the experiment reported from 50,000 to 60,000 words. Babbitt claims that students who had not studied Greek regularly reported from 10,000 to 15,000 words less than those who had (1).

Thus we see that different investigators have carried on the study of vocabularies in various ways with varying results. For the sake of convenience the following tables have been prepared, showing generalizations in regard to the size of vocabulary of students ranging from the second grade to the college:

TABLE II.

Average Vocabulary of Students in the Grades.

A.

Investigations by Kirkpatrick (33).

Grade II	4480	Grade VI	8,700
Grade III	6620	Grade VII	10,660
Grade IV	7020	Grade VIII	12,000
Grade V	7860	Grade IX	13,400

B.

Investigations by Doran (18).

Grade VI	4,192	Grade VI	11,634
Grade VII	5,849	Grade VII	13,675
Grade VIII	7,937	Grade VIII	17,138
		Grade IX	18,865

TABLE III.

Average Vocabulary for High School Students.

Investigations by Kirkpatrick (33).

First year	15,640	Third year	17,600
Second year	16,020	Fourth year	18,720

TABLE IV.

Average Vocabulary of Students in the Normal School.

A.

Investigations by Kirkpatrick (33).

Average for all years, Normal School 19,000

B.

Investigations by Doran (18).

First year	11,700	Fourth year	19,400
Second year	15,400	Fifth year	21,500
Third year	15,750		

TABLE V.

Average Vocabulary of College Students.

A.

Investigations by Kirkpatrick (33).

Average for four years, College 20,120

B.

Investigations by Whipple (59).

Average for four years, College 20,512

C.

Investigations by Babbitt (1).

Sophomore Class, approximately 50,000 to 60,000

TABLE VI.

Average Vocabulary in Relation to Scholastic Status

Investigations by Kirkpatrick (33).

Scholastic Status	Vocabulary
Grade II	4,480
Grade III	6,620
Grade IV	7,020
Grade V	7,860
Grade VI	8,700
Grade VII	10,660
Grade VIII	12,000
Grade IX	13,400
High School, 1st year	15,640
High School, 2nd year	16,020
High School, 3rd year	17,600
High School, 4th year	18,720
Normal School, all years	19,000
College, all years	20,120

By reference to Table II it will be seen that Kirkpatrick's results for the sixth, seventh and eighth grades lie about midway between the two sets reported by Doran. The investigations by Doran of the students in the grades were conducted in two different schools, the first at Edmond, Oklahoma, and the second in a village school in Arkansas. It seems remarkable that such divergent results should have been obtained. Since the results obtained by Doran show, in general, a fairly close agreement to those reported by Kirkpatrick, and since the data at hand concerning the investigations of the latter is more complete, Table VI has been prepared, showing the average vocabulary in relation to scholastic status as ascertained by Kirkpatrick. This Table will again be referred to after the results of the experiments conducted at Colorado College have been presented.

It is well to note that Babbitt, whose results show the size of the college student's vocabulary to be about three times as great as is reported by Kirk-

patrick and Whipple, used a dictionary containing over 100,000 words, whereas the investigations of the other two were conducted by means of much smaller dictionaries. Further comment upon this matter will be made in Part IV.

Note: Since the compilation of the above statistics and tables there has appeared, in School and Society, Nov. 13, 1915, an article concerning vocabulary tests as measures of school efficiency(10). The Kirkpatrick list of one hundred words was used in testing the children of the upper five grades of Speyer School, the demonstration school of Teachers College, Columbia University. A second test was conducted with a similar list obtained from Webster's Elementary School Dictionary, which "includes over 44,000 entries, not including several thousand inflected forms." The Kirkpatrick list was selected from Webster's Academic Dictionary, which contains 28,000 words. The following table shows the results of these two series of tests:

	Kirkpatrick List.		El. Dict. List.
Grade	Kirkpatrick Group	Speyer Group	Speyer Group
4	7,020	10,886	.....
5	7,860	13,216	21,648
6	8,700	17,038	30,184
7	10,660	17,052	27,720
8	12,000	18,704	32,120

It was found in testing children in several neighboring schools that those of the Speyer School had a vocabulary from 10 to 25 per cent greater than those of the same grade in other schools. The difference is accounted for by the fact that the curriculum of the Speyer School is more intimately and vitally associated with every-day life and calls for more initiative on the part of the student than is the case in the usual elementary school curriculum.

Babbitt experimented with a number of people who had never been to college, but, with a common school education, were regular readers of books and periodicals. These people generally reported the size of their vocabulary to be from 25,000 to 35,000 words. Some went much higher, even as high as the lower figures for the college students which were tested by Babbit(1).

Doran made a few individual tests among college students and others. These tests were, for the most

part, based upon the Century and the Standard dictionaries. Some of his reports are interestnig to compare with the results of the other investigators.

He reports a girl in the second year academy who knew 23,100 words; another girl in the third year academy who knew 26,600; a man in the fourth year academy reports 41,895; while two men in college report 40,681 and 53,130 respectively (18).

Three boys, aged about thirteen years, had vocabularies of 22,722; 26,376; and 28,480 words each. A young lady 19 years old who had not quite finished the literary course in a young lady's seminary, apparently knew 20,537 words when tested by a comparatively small dictionary. With a large dictionary the result would doubtless have been much higher (18).

Doran, by a very extensive test, found that a certain young lady could define 92,161 words. He himself, almost twenty years ago, knew 84,000. A few years later, however, he estimated his vocabulary at 100,000 words. He knew thousands of words not in the dictionary, for instance technical and vernacular names in Zoology, Botany, and other sciences (18).

The experience of J. M. Greenwood is rather unique. He reports the following incident to have occurred during the first term he taught: "I had bought a second-hand copy of Webster's Academic Dictionary . . . . I took up Webster's Old Blue Book, and I marked down all the words between its two covers of whose meanings I had any doubts. There were sixty-eight of these words, and I hunted up their meanings in this dictionary. I had never looked into a dictionary of any kind a dozen times in my life before, and yet I was 'shakey' on only sixty-eight out of about 10,000 different words in that book" (18).

Edwin S. DuPoncot, having a knowledge of more than twenty languages, estimates his total vocabulary for the entire number to comprise 302,000

words (18). Babbitt estimates the total number of words which he knew in nine languages, including English, to be 285,000 (1). Table VII analyses the vocabularies of these two men.

TABLE VII.

Vocabularies of the Same Individual in Several Languages.

A.

Total Vocabulary of Edwin S. DuPoncot (18).

English	70,000	Old High Ger.	5,000
French	50,000	Norwegian	3,000
German	45,000	Swedish	3,000
Spanish	35,000	Danish	3,000
Italian	25,000	Sanskrit	2,000
Latin	20,000	Anglo-Saxon	2,000
Portuguese	15,000	Hebrew	1,000
Old French	10,000	All others	3,000
Greek	10,000		
		Total	302,000

B.

Total Vocabulary of E. H. Babbitt (1).

English	65,000	Latin	18,000
German	58,000	Spanish	16,000
Danish	52,000	Greek	13,000
French	30,000	Old Norse	11,000
Italian	22,000		
		Total	285,000

The data at hand concerning the relation between the size of vocabulary and the class record of students is of too meagre and unreliable a nature for tabulation. Doran, as the result of his own observations, concluded that those who ranked high in their classes had a good vocabulary; and that those who had a good vocabulary ranked high in their classes. He comments thus: "It matters little whether we say students do well because they have

good vocabularies, or they have good vocabularies because they do well; it matters little which is cause or which effect—it follows that if you increase a student's vocabulary you increase his standing in his class. The one who has a vague, ill-defined knowledge of words, has vague and ill-defined thoughts, and is incapable of definite, systematic, and logical thinking. If a word is a sign of an idea, bungling, meaningless expressions indicate a clouded, vacant brain" (18).

Kirkpatrick found in general a tendency toward positive correlation between the size of vocabulary and class standing. In the case of individuals however, there was often a wide divergence between the class room marks and the vocabulary-index. In the grades there was no clear proof of the relationship. In one instance a number of freshmen were tested and the vocabulary index compared to the classroom marks. The average number of words known to the men who in general ranked above the average of their class in the various subjects was 5 per cent greater than for those ranking below the average. The women who ranked highest in English averaged nearly 4 per cent better in size of vocabulary than those who ranked lowest in English (33).

Whipple discovered a positive correlation between the vocabulary-index of a number of college students and their grades in his classes in educational psychology. He found that in general those students who had read the most books and magazines had the largest vocabularies (59).

It has been suggested by a number of men that a vocabulary test might be employed as an examination for college entrance. For example, Kirkpatrick says: "The question naturally arises whether size of vocabulary and ability to define and use words is not a sufficiently accurate measure of the intellectual ability of youths to justify the use of vocabulary tests in examinations for entrance to

college. College work is supposed to be general in its character, demanding general ability, of which the vocabulary test ought to give an indication. Of course if students should devote their time to a special study of the dictionary, the test would become special and valueless, since size of vocabulary would not then be an accompaniment and indication of experiences and intellectual advances, but of special study of modes of defining words in terms of other word symbols" (33).

As to sex influences upon the size of vocabulary we again find little except of a very general nature. Kirkpatrick is of the opinion that there is no constant difference between the sexes (33). Whipple did not feel that a positive sex difference had been established, though there was a suggestion of superiority of boys over girls, and of men over women (59). Doran thought it very probable that up to the fourth or fifth year girls knew or used more words than boys did. Among students he claims that in northern schools boys in the same classes and of the same age knew more words than did the girls, while in southern schools the reverse was true. He supposes this geographical influence to arise from the fact that the northern boy is more bold, aggressive and interrogatory than the northern girl or the southern boy; the southern girl is supposedly bolder and more aggressive than her sisters of the north and her brothers of the south. According to Doran, man should, in general, have the larger vocabulary because of his aggressive and inquisitive disposition (18).

Several authors agree that in infancy up to the fourth or fifth year the girl knows the most words. The boy learns to talk at a later age than the girl. For several years he is behind her in size of vocabulary, but at the age of five or six he takes the lead and retains it throughout the remainder of life. Thus, after the age of infancy the boy knows more

words than the girl, the man has command of a larger vocabulary than the woman (18).

The field of vocabulary study is a fertile one. The investigators in this line of work have been comparatively few. Their methods of conducting the research have been various. The results and conclusions are more or less inconsistent. Yet, when we group their results as a whole, we find that a great deal has been accomplished by these pioneers in the study of vocabularies.

PART III.

FALSE DEFINITION TEST.

The question has arisen as to the practicability of substituting a vocabulary test for examinations for college entrance, promotion, etc. Since a word is a sign of an idea, surely the more words one knows, the more ideas he possesses. The larger his vocabulary, the greater we would expect to find the scope of his general knowledge. If words indicate ideas and ideas indicate intelligence, why should we not simply employ a vocabulary test when the intellectual ability or status of an individual is to be ascertained? In the case of grading, or rating, students in the schools and colleges, could a vocabulary test be substituted, either wholly or partially, for the methods now in vogue? Is a vocabulary test a satisfactory substitute for examinations in determining the qualifications of an individual, either for admittance to a school or college or for advancement within or graduation from the school or college? Is there a correlation between grades or rank and the size of vocabulary? A satisfactory answer to these questions can be found only by the method of experimentation.

The fundamental purpose of the vocabulary tests which were conducted at Colorado College was to ascertain what relation, if any, the size of an individual's vocabulary bore to that individual's college rank and grades. A secondary purpose was to discover whether or not sex influences play an important part in the size of vocabularies. The attempt to deter-

mine the actual size of individual vocabularies was given less consideration, for reasons which will presently appear.

We have seen that different investigators have used different methods for the determination of size of vocabulary. For testing the vocabulary of infants the actual words used by the infant during a certain period of time may be recorded. For determining the size of an adult's vocabulary the individual to be tested may be asked to define each word in the dictionary with which he is familiar. Or he may be asked to define, or perhaps simply indicate, each word of a representative group of which he knows the meaning, the total vocabulary being estimated from the smaller group. Other methods for ascertaining the size of vocabularies have been employed, but these here mentioned, the one for testing infants and the other two for experimentation with adults, are probably the most noteworthy.

For the experiments conducted at Colorado College a new form of vocabulary test was devised. The plan was to select one thousand representative words and have each followed by four definitions, of which one was correct and the other three wrong. The position of the correct definition among the four was determined purely by chance, the order being based upon the results of a number of casts of dice. The subject was requested to check the correct definition of every word with which he was familiar.

The one thousand words were selected from the Funk & Wagnalls New Standard Dictionary, in which the space devoted to the vocabulary comprises 2757 pages; the method was to take the first word of the third column of every third page and of every thirtieth page. The object being, obviously, simply to obtain representatively distributed words. After the words were selected it was found that a large number of them were so unusual as to be, for the most part, unfamiliar to the average person. For

this reason the system of using four definitions, one correct and three wrong, for each word, as explained above, was applied to only six hundred of the words on the entire list; of the remaining four hundred, consisting of such terms as were considered unfamiliar to the average person, the subject was asked to define those words which he knew. This division of the entire list of one thousand words into two parts was done as a matter of convenience, both to the experimenter and to the subject, and for the sake of economy. The reason for employing a system whereby the subject checks the correct definition rather than a system in which the subject must actually furnish the definition himself is twofold: in the first place, definitions, whether written or oral, as given by students or others who are not specialists in philology are often of a very vague and hazy nature—so vague and hazy in fact that it is at times impossible to determine whether the subject really knows the word or not; in the second place, a person may be familiar with a word but because of lack of proper associations he may be unable to define it in terms of other word symbols. It was for the purpose of minimizing these difficulties that the system of four definitions was used. It is quite obvious that the difficulties above referred to would still be encountered in the list of four hundred words —those for which no definitions were furnished; however, these words were for the most part so unusual to the average person that the final results were vitiated very little by the fact that for this part of the list definitions were not furnished.

In preparing the list of words, biographical and geographical terms were omitted. Excluding these, the total number of words remaining in the dictionary used amounts to approximately 375,000. This number includes derivatives, compounds, homonyms, variants, obseletes, colloquialisms, etc. Owing to the manner of selecting the words used in the vocabulary test, and because of the dictionary ar-

rangement of main words and relatives or subwords, the list of one thousand words is not a fair sample of the entire 375,000. However, it is safe to say that, at the lowest possible calculation, the list of words as used in the test is representative of not less than 250,000 vocabulary terms.

In recording the results the number of words having the correct definition checked was noted; from this, one third of the number of words wrongly checked was deducted, the theory being that according to the laws of probability the subject could, by pure chance, guess the correct definition for unfamiliar words once out of every four times; so that for every three which he had guessed wrongly the chances were in favor of his having guessed one correctly. To the number of words thus determined as known on the list of six hundred was added the number of words correctly defined on the list of four hundred. The result, that is, the total number of words considered as known on both lists, was called the vocabulary index. The vocabulary index multiplied by the number of words of which each word of the test is representative gives the total vocabulary. Thus, if we consider this test as representative of 250,000 words, in order to calculate the size of the total vocabulary the index must be multiplied by 250. Owing to the method of selecting the words, as explained above, the best we can hope for in the present test as regards the size of the entire vocabulary is a very rough approximation. But in using these figures the results can scarcely be too high. The minimum is used because of the fact that even the results as thus obtained in regard to the size of individual vocabularies are greatly in excess of those obtained by other investigators.

Whatever may be the faults and inadequacies of the system of vocabulary test that has just been described, *the test is at least relative.* It was not designed primarily as a means of determining the

size of an individual's total vocabulary, but rather for the investigation of such relationship as it was felt might exist between the size of vocabulary and grades or sex. It is the opinion of the writer that for this purpose the test is wholly adequate and practicable. A sample of the test sheets as actually used will be found in the appendix and may be referred to at any time.

In conducting the vocabulary experiments at Colorado College the subjects were obtained chiefly from classes in Psychology, Education, and English. In this way, strictly representative groups were secured, especially since the courses in Psycology and in English were required respectively of all Juniors and Freshmen. For tabulation the subjects were grouped according to college classification. The experiment was extended to include a number of high school seniors and freshmen. A few individuals other than college or high school students were also tested. Subjects were requested not to check words of which they were reasonably doubtful. They were warned that a certain deduction would be made for all wrongly marked. And yet, though many of the subjects thought the deduction would consist of as many words as they had wrongly checked, the average number of words incorrectly marked on each list of six hundred was almost fifty. This shows how predominant is the characteristic of tending to overestimate one's mental capacity.

The results of these experiments are to be found in Tables VIII to XXIV inclusive. The results are tabulated in regard to the size of the vocabulary index, being arranged in regularly descending order. Tables VIII to XIII inclusive show the words by classes without regard to sex. Tables XIV to XIX inclusive illustrate the sex influences. Tables XX and XXI show the results obtained from the experiments carried on with a few individuals not registered in college or high school. Table XXII pre-

sents the relation between vocabulary and major subject. Table XXIII offers generalizations in reference to sex differences, and Table XXIV presents calculations in regard to the total size of vocabularies.

In the tables the index number (Ind. No.) refers to the particular person, or "subject", under consideration. In other words, the index number is merely a substitute for the subject's name. The vocabulary index (V.I.) shows the number of words known in the total list of one thousand (after all corrections and deductions had been made). The average grade (Av. G.) has reference to the average grade or mark received by the individual for all his college or high school classes. The age is given in years and is only approximate. Sex is indicated by M. for male and F. for female.

TABLE VIII.

College Seniors.

Ind. No.	V. I.	Av. G.	Age.	Sex
4D2	492	93	22	M.
4H2	449	82	23	F.
4W1	417	89	24	M.
4S2	408	86	27	F.
4D1	405	83	26	M.
4S1	396	91	23	F.
4K1	389	81	22	F.
4S3	374	89	21	F.
4H3	358	79	21	M.
4M1	354	75	25	F.
4H1	339	73	24	F.
4R1	339	71	22	F.
4G1	329	85	23	F.
4A1	301	80	23	M.
4B1	295	82	28	F.
Total	5645	1239	354	

(Continued on next page)

(Table VIII, continued)

Average	376.3	82.6	23.6
Median	374	82	23
M. V.	42.89	4.97	1.65

TABLE IX.

College Juniors.

Ind. No.	V. I.	Av. G.	Age.	Sex
3J2	467	91	27	F.
3S2	445	92	21	F.
3S1	442	89	22	M.
3N1	442	78	21	M.
3H8	437	78	24	M.
3H2	436	86	22	M.
3S8	435	88	20	F.
3M1	427	78	21	M.
3W1	424	74	20	F.
3G3	407	80	23	F.
3E2	404	82	22	F.
3H6	403	72	21	F.
3B6	402	69	22	F.
3S3	391	77	22	M.
3C2	381	78	23	M.
3S6	379	88	21	F.
3R3	376	82	21	M.
3S4	369	76	21	F.
3T2	367	75	21	M.
3E1	365	75	21	M.
3B9	365	68	22	F.
3F1	358	78	23	F.
3Y1	358	77	23	F.
3H7	357	83	22	F.
3B5	356	75	21	M.
3F2	355	78	20	F.
3H1	355	76	20	F.

(Continued on next page)

(Table IX, continued)

3E3	354	85	21	F.
3B7	345	86	22	M.
3D1	345	78	22	F.
3T1	342	73	22	M.
3L1	337	85	21	F.
3V1	333	80	22	F.
3B3	327	85	26	F.
3B2	327	71	24	M.
3J1	324	76	22	F.
3H5	318	82	20	F.
3B4	314	70	23	M.
3G2	314	86	22	M.
3P2	311	80	20	F.
3L2	299	88	22	F.
3P1	291	91	21	F.
3S5	279	78	22	F.
3C1	279	67	25	M.
3B1	274	72	21	F.
3R2	269	69	22	M.
3B8	264	77	20	F.
3R1	264	75	28	F.
3S7	222	87	24	F.
3G1	221	69	21	F.
3H4	216	84	25	M.
3H3	208	75	24	F.
Total	18080	4112	1149	
Average	347.7	79.1	22.1	
Median	355	78	22	
M. V.	48.9	3.48	1.2	

TABLE X.

College Sophomores.

Ind. No.	V. I.	Av. G.	Age.	Sex
2J2	434	77	20	M.
2W6	418	76	23	M.
2H2	414	80	20	F.
2N1	409	77	23	M.
2S4	403	77	22	M.
2T2	401	79	22	F.
2F1	398	92	21	M.
2P1	395	87	24	F.
2T1	388	90	26	F.
2W2	383	81	21	M.
2B3	380	87	19	F.
2K1	375	72	23	M.
2G3	371	94	20	F.
2W3	367	78	25	M.
2B6	362	86	19	M.
2C6	355	80	21	F.
2B5	354	71	21	M.
2M2	354	70	24	M.
2G2	351	72	20	F.
2W1	350	65	22	F.
2W4	345	67	21	M.
2D2	341	76	19	F.
2W5	340	75	21	F.
2J1	338	68	23	M.
2S1	331	82	20	F.
2T3	330	93	21	M.
2C5	328	80	22	F.
2C1	327	93	18	F.
2S2	324	66	23	M.
2M1	322	87	23	F.
2S3	321	85	21	F.
2A1	320	88	20	F.
2C4	314	86	20	F.
2C3	312	73	18	F.
2B4	311	66	23	M.

(Continued on next page)

(Table X, continued)

2C2	296	67	23	F.
2E1	287	86	22	F.
2H1	286	76	21	F.
2L1	281	72	22	F.
2Y1	280	87	21	M.
2D1	277	81	20	F.
2B2	273	76	19	F.
2B1	271	79	19	F.
2G1	194	63	20	M.
Total	15011	3463	936	
Average	341.2	78.7	21.25	
Median	340.5	78.5	21	
M. V.	38.3	6.9	1.45	

TABLE XI.

College Freshmen.

Ind. No.	V. I.	Av. G.	Age.	Sex
1J2	420	65	20	M.
1W4	411	73	19	M.
1S5	401	69	20	M.
1A2	387	60	19	M.
1R3	382	84	23	F.
1A3	381	54	20	M.
1H3	372	84	21	M.
1R2	372	75	19	M.
1C1	371	85	17	M.
1F2	370	79	19	M.
1S9	365	75	21	F.
1C2	364	78	19	M.
1G4	356	67	19	M.
1G6	355	73	20	M.
1B1	352	91	20	F.
1O1	351	62	22	M.
1M9	346	76	18	F.
1S3	346	66	19	F.

(Continued on next page)

(Table XI, continued)

1K3	340	77	18	F.
1P2	339	88	18	M.
1A1	337	71	20	M.
1M3	335	76	20	F.
1S1	333	66	21	F.
1F1	331	84	20	F.
1J1	330	92	20	M.
1S4	329	83	19	M.
1M7	329	65	21	M.
1B3	321	74	20	M.
1G2	320	71	21	M.
1M8	317	63	21	F.
1S6	315	76	19	F.
1W1	311	87	19	F.
1H1	305	76	20	F.
1N1	297	72	19	F.
1S7	294	67	21	F.
1D2	293	82	20	M.
1M6	292	88	18	F.
1T3	290	72	18	F.
1P3	283	67	24	M.
1K1	282	80	20	F.
1W5	277	66	24	M.
1S2	277	52	19	M.
1L4	276	70	17	F.
1D1	276	65	20	M.
1K2	273	88	20	M.
1H4	268	75	22	M.
1N2	267	65	19	F.
1T4	265	69	20	F.
1F3	261	72	19	F.
1L2	260	61	20	M.
1B2	259	76	19	M.
1G5	257	66	20	F.
1T1	251	86	18	M.
1G3	246	92	19	F.
1S8	245	77	29	M.
1E1	238	68	20	F.

(Continued on next page)

(Table XI, continued)

1L2	235	62	19	F.
1M5	234	67	19	F.
1M4	232	65	22	F.
1W2	230	59	19	M.
1P1	229	72	19	F.
1T2	223	81	17	M.
1B4	220	73	19	F.
1B5	217	73	19	F.
1W3	215	65	19	F.
1H2	177	61	19	M.
1R1	175	56	20	F.
1M2	173	87	19	F.
1M1	130	57	20	M.
1L3	111	57	20	M.
Total	20622	5076	1387	
Average	294.6	72.5	19.8	
Median	293.5	72	20	
M. V.	53.6	7.9	1.1	

TABLE XII.

High School Seniors.

Ind. No.	V. I.	Av. G.	Age.	Sex
04E1	426	A	18	F.
04S3	376	B	17	F.
04S1	366	A	19	M.
04G1	365	B	18	M.
04T1	363	A	18	F.
04R1	332	B	19	F.
04H1	330	B	18	F.
04G2	327	B	17	M.
04O1	326	C	18	F.
04L2	310	B	20	M.
04M1	305	C	18	F.
04B1	296	B	18	F.

(Continued on next page)

(Table XII, continued)

04B3	278	C	19	M.
04G3	274	A	19	F.
04B2	273	B	18	F.
04C1	265	B	19	F.
04L1	257	B	19	M.
04K1	248	B	18	M.
04C2	245	C	18	F.
04H2	238	A	17	M.
04S2	204	B	18	F.
Total	6404		383	
Average	305		18.24	
Median	305		18	
M. V.	44.9		.94	

TABLE XIII.

High School Freshmen.

Ind. No.	V. I.	Av. G.	Age.	Sex
01S4	352	A	15	M.
01G1	339	C	16	M.
01M2	317	B	14	M.
01M1	314	A	17	F.
01A1	305	A	15	F.
01P1	300	A	17	F.
01T1	297	B	16	M.
01L1	295	B	15	M.
01S1	290	A	15	F.
01Y1	276	C	16	F.
01N2	270	B	14	M.
01H1	264	B	14	F.
01S3	264	B	16	M.
01S2	258	B	15	M.
01M3	256	C	15	F.
01J2	245	C	16	M.
01D2	231	C	15	M.
01J1	218	C	15	F.

(Continued on next page)

(Table XIII, continued)

01N1	202	B	14	F.
01D1	196	C	16	M.
01P2	194	C	16	M.
01F1	182	B	16	F.
Total	5865		338	
Average	266.6		15.4	
Median	267		15	
M. V.	38.4		.5	

TABLE XIV.

Sex Influences. College Seniors.

A. Male.		B. Female	
Ind. No.	V. I.	Ind. No.	V. I.
4D2	492	4H2	449
4W1	417	4S2	408
4D1	405	4S1	396
4H3	358	4K1	389
4A1	301	4S3	374
		4M1	354
Total	1973	4H1	339
Average	394.6	4R1	339
Median	405	4G1	329
M. V.	52.1	4B1	295
		Total	3672
		Average	367.2
		Median	364
		M. V.	36

TABLE XV.

Sex Influences. College Juniors.

A. Male.		B. Female	
Ind. No.	V. I.	Ind. No.	V. I.
3S1	442	3J2	467
3N1	442	3S2	445

(Continued on next page)

(Table XV, continued)

3H8	437
3H2	436
3M1	427
3S3	391
3C2	381
3R3	376
3T2	367
3E1	365
3B5	356
3B7	345
3T1	342
3B2	327
3B4	314
3G2	314
3C1	279
3R2	269
3H4	216
Total	6826
Average	359.3
Median	365
M. V.	44.3

3S8	435
3W1	424
3G3	407
3E2	404
3H6	403
3B6	402
3S6	379
3S4	369
3B9	365
3F1	358
3Y1	358
3H7	357
3F2	355
3H1	355
3E3	354
3D1	345
3L1	337
3V1	333
3B3	327
3J1	324
3H5	318
3P2	311
3L2	299
3P1	291
3S5	279
3B1	274
3B8	264
3R1	264
3S7	222
3G1	221
3H3	208
Total	11254
Average	344
Median	354
M. V.	50.5

TABLE XVI.

Sex Influences. College Sophomores

A. Male.		B. Female	
Ind. No.	V. I.	Ind. No.	V. I.
2J2	434	2H2	414
2W6	418	2T2	401
2N1	409	2P1	395
2S4	403	2T1	388
2F1	398	2B3	380
2W2	383	2G3	371
2K1	375	2C6	355
2W3	367	2G2	351
2B6	362	2W1	350
2B5	354	2D2	341
2M2	354	2W5	340
2W4	345	2S1	331
2J1	338	2C5	328
2T3	330	2C1	327
2S2	324	2M1	322
2B4	311	2S3	321
2Y1	280	2A1	320
2G1	194	2C4	314
		2C3	312
Total	6379	2C2	296
Average	354.4	2E1	287
Median	358	2H1	286
M. V.	39.9	2L1	281
		2D1	277
		2B2	273
		2B1	271
		Total	8632
		Average	332
		Median	327.5
		M. V.	33.4

TABLE XVII.

Sex Influences. College Freshmen.

A. Male.		B. Female	
Ind. No.	V. I.	Ind. No.	V. I.
1J2	420	1R3	382
1W4	411	1S9	365
1S5	401	1B1	352
1A2	387	1M9	346
1A3	381	1S3	346
1H3	372	1K3	340
1R2	372	1M3	335
1C1	371	1S1	333
1F2	370	1F1	331
1C2	364	1M8	317
1G4	356	1S6	315
1G6	355	1W1	311
1O1	351	1H1	305
1P2	339	1N1	297
1A1	337	1S7	294
1J1	330	1M6	292
1S4	329	1T3	290
1M7	329	1K1	282
1B3	321	1L4	276
1G2	320	1N2	267
1D2	293	1T4	265
1P3	283	1F3	261
1W5	277	1G5	257
1S2	277	1G3	246
1D1	276	1E1	238
1K2	273	1L2	235
1H4	268	1M5	234
1L2	260	1M4	232
1B2	259	1P1	229
1T1	251	1B4	220
1S8	245	1B5	217
1W2	230	1W3	215
1T2	223	1R1	175

(Continued on next page)

(Table XVII, continued)

1H2	177	1M2	173
1M1	130		
1L3	111	Total	9573
		Average	281.6
Total	11049	Median	286
Average	306.9	M. V.	45
Median	325		
M. V.	59.9		

TABLE XVIII.

Sex Influences. High School Seniors.

A. Male.		B. Female	
Ind. No.	V. I.	Ind. No.	V. I.
04S1	366	04E1	426
04G1	365	04S3	376
04G2	327	04T1	363
04L2	310	04R1	332
04B3	278	04H1	330
04L1	257	04O1	326
04K1	248	04M1	305
04H2	238	04B1	296
		04G3	274
Total	2389	04B2	273
Average	298.6	04C1	265
Median	294	04C2	245
M. V.	43.4	04S2	204
		Total	4015
		Average	308.8
		Median	305
		M. V.	46.1

TABLE XIX.

Sex Influences. High School Freshmen.

A. Male.		B. Female	
Ind. No.	V. I.	Ind. No.	V. I.
01S4	352	01M1	314
01G1	339	01A1	305
01M2	317	01P1	300
01T1	297	01S1	290
01L1	295	01Y1	276
01N2	270	01H1	264
O1S3	264	01M3	256
O1S2	258	01J1	218
01J2	245	01N1	202
01D2	231	01F1	182
01D1	196		
01P2	194	Total	2607
Total	3258	Average	260.7
Average	271.5	Median	270
Median	267	M. V.	37
M. V.	40.4		

TABLE XX.

General.

Ind. No.	V. I.	Sex
B1	576	M.
J1	510	F.
B2	498	M.
S1	490	M.
A1	461	F.
R1	452	M.
G2	451	M.
G1	430	F.
G4	429	F.
H1	426	M.
W1	414	F.

(Continued on next page)

(Table XX, continued)

G3	384	F.
K1	376	F.
H2	368	F.
W2	333	F.
D1	315	M.
Total	6913	
Average	432	
Median	429.5	
M. V.	51.7	

TABLE XXI.

Sex Influences. General.

A. Male.		B. Female	
Ind. No.	V. I.	Ind. No.	V. I.
B1	576	J1	510
B2	498	A1	461
S1	490	G1	430
R1	452	G4	429
G2	451	W1	414
H1	426	G3	384
D1	315	K1	376
		H2	368
Total	3208	W2	333
Average	458.3		
Median	452	Total	3705
M. V.	39.8	Average	411.7
		Median	414
		M. V.	41

TABLE XXII.

Relation Between Major Subject and Vocabulary

College Juniors.

Ind. No.	V. I.	Major Subject
3J2	467	English
3H2	436	Physics
3W1	424	Biology
3G3	407	Economics
3E2	404	English
3H6	403	English
3C2	381	English
3R3	376	Biology
3S4	369	English
3T2	367	English
3B9	365	Education
3F1	358	English
3Y1	358	Education
3H7	357	Biology
3H1	355	Psycology
3E3	354	English
3L1	337	German
3B3	327	Education
3J1	324	English
3H5	318	English
3G2	314	English
3P2	311	English
3L2	299	Latin
3P1	291	Mathematics
3S5	279	English
3C1	279	Chemistry
3B1	274	Philosophy
3R1	264	English
3S7	222	History
3H4	216	Mathematics
3H3	208	Biology

TABLE XXIII.

Sex Influences upon Size of Vocabulary.

Scholastic Status.	V. I. Male.	V. I. Female
College Seniors	394.6	367.2
College Juniors	359.3	344
College Sophomores	354.4	332
College Freshmen	306.9	281.6
High School Seniors	298.6	308.8
High School Fr'hmen	271.5	260.7
Total*	1985.3	1894.3
Average*	330.9	315.7
Total for College only,*	1415.2	1324.8
Av. for College only*	353.8	331.2

TABLE XXIV.

Average Vocabulary in Relation to Scholastic Status

Scholastic Status.	Vocabulary.
High School Freshmen	66,650
High School Seniors	76,250
College Freshmen	73,650
College Sophomores	85,300
College Juniors	86,925
College Seniors	94,075
High School, average*	71,450
College, average*	84,988

A glance at the tables is sufficient to convince the most skeptical that, taking the cases individually, there is no agreement worthy of note between the size of vocabulary and scholastic grades. In the case of the college seniors the individual who leads in the vocabulary list also has the highest grade. But the person ranking second in size of vocabulary falls below the average in respect to grades. Among

*Computed by class averages.

the juniors we find an individual with a grade of 91, which is exceptionally high, ranking far down on the scale in size of vocabulary. The sophomore leading the list has a grade of 77, which is below the average, while the freshman leading his class in vocabulary has an average grade of only 65. In brief, considering the cases individually, we are forced to the conclusion that there is absolutely no agreement adequate for practical purposes between the size of vocabulary and scholastic grades.

Nevertheless, in a very general way there is a certain agreement between size of vocabulary and grades. Thus, if we take the average vocabulary index for all the college seniors who rank above the average in scholastic grades and compare this with the vocabulary index for all those seniors ranking below the average in grades we find a difference of 50. The vocabulary indices are 403 for those above the average grade and 353 for those below. Treating the other college classes similarly the results show that in every instance the average vocabulary index for those students ranking above the average in scholastic grades is greater than that for those ranking below the average. The figures are, for the juniors, 355.2 and 342.2, giving a difference of 13; for the sophomores, 343.4 and 338.9, the difference being 4.5; and for the freshmen, 310.5 and 279.6, with a difference of 30.9. We may, therefore, make the assertion that in a very general way there is a positive correlation between size of vocabulary and scholastic grades.

Tables XIV to XIX inclusive show that, in general, the vocabulary of the male is somewhat larger than that of the female. This fact is shown more clearly in Table XXIII. In only one class, the high school seniors, does the average vocabulary for the female exceed that for the male. Taking the college classes only, the superiority of the male's vocabulary is quite marked. It is well to state here that, in the

opinion of the writer, the college students who acted as subjects for this vocabulary test were more representative than were the high school students. This was due to the manner in which these subjects were selected. Furthermore, in the college classes, with the exception of the seniors, the groups tested are much larger than in the high school classes. For this reason the data concerning the college students is probably more reliable than that concerning the high school students.

Tables XX and XXI, which present data concerning a number of people not entered in either the high school or the college, are offered merely for comparison, and as individual tests having to do with total size of vocabularies. The persons experimented upon were from various walks of life, some of them being college graduates and others having had only a common grade school education. Their ages are for the most part between 20 and 30. The number of persons is too few and the data concerning them too inadequate to furnish material for reliable conclusions. The persons are certainly not representative of the average type of individual. The majority of them are college graduates. Several, however, who have had no college education, perhaps not even a high school education, rank above the average of this group in size of vocabulary. And the average for this group is far above that for any other group considered.

According to the data presented in Table XXII, there is little, if any, relation between major subject and size of vocabulary. Apparently English majors are slightly above the average, though without more complete data we are not warranted in arriving at any trustworthy conclusions in this respect. As a matter of fact, among the seniors who were tested those majoring in English were not up to the average in respect to size of vocabulary. Only juniors are represented in Table XXII, the reason being

that for this class only was there sufficient data at hand for adequate tabulation concerning majors. The seniors were not selected due to the paucity of those tested. Table XXII should, however, probably suffice to show that major subjects furnish us with no means of judging reliably the relative size of vocabularies.

Note.— A great deal has been said, especially in recent years, concerning the value of Latin and Greek and the effects of these subjects upon the English vocabulary. As has been previously mentioned, the tests at Colorado College give us practically no reliable data on this phase of the subject. In the writer's opinion, however, the value of a study of the classics in connection with English has been somewhat universally overestimated. A few possibly go to the other extreme. Beyer says, "Ninety-nine and a half per cent of the words we speak and hear are native English"(9). Chamberlain claims that the modern English requires "a lexicon nearly fifty times as large as that which interprets all there is left of the prose and verse of her would-be Latin masters" (15). It is true that many of our words are based upon Latin and Greek roots, while a comparatively few have come to us with little or no change. However, it is well to bear in mind the fact that modern English words which are founded upon Latin or Greek bases have in many cases become so dissimilar to the originals that even the best student of the classics is unable to define them accurately simply by applying their former classical meaning. The writer has observed a number of highly ludicrous attempts at the definition of English words by use of the meaning of the Latin or Greek originals. Nevertheless, let us not lose sight of the fact that in general extensive knowledge of Latin and Greek roots, prefixes, and suffixes will prove to be an almost incalculable aid in certain lines of study, especially in a number of the sciences. It is in this realm that we may expect the closest approximation to the English definition by use of the original meaning. That the classics are a great aid to the scientist who wishes to form new words need not be questioned. For example, the chemist may desire to follow the German plan of including in one word an entire descriptive sentence, and as a result we have the following rather startling contribution: *tetramethyldiamidotriphenylmethane.* The psychologist desires to use a term expressing an unreasonable fear of losing one's position; not being able to find such a term in the dictionary, he has recourse to the classics and manufactures the word, *deempleophobia;* this word carries

with it the antonym expressive of the hobo's attitude toward work, *empleophobia;* similarly, as a counter-term to *empleomania* we may devise the expression, *deempleomania.* Thus the classics are called to aid when the approved vernacular is found to be inadequate.

The results offered in Table XXIV are computed on the basis that each word in the vocabulary test represents 250 words in the dictionary. According to these calculations the average college student is in command of 85,000 words, while the average high school student knows about 14,000 fewer terms. These results seem very much out of proportion when compared with the figures offered by other investigators. Additional comment upon this matter is to be found in Part IV of this treatise.

It is of interest to note the extremely wide variation in the size of individual vocabularies. For example, a number of college freshmen rank above the average senior in vocabulary index. Several high school freshmen rank higher than the lowest of the college seniors. One high school senior actually has at command, if the test is a reliable indicator, more words than any one of the college freshmen. The mean variation of a group demonstrates nicely the wide range of individuals within the group.

We have seen that there is no correlation, except in a very inadequately general way, between size of vocabulary and scholastic grades. Can we then adhere to the statement that words represent intelligence? Is theory overthrown by fact? Grades represent a certain kind of intelligence. If words also represent intelligence, and there is no correlation worthy of note between grades and size of vocabulary, how are we to explain this paradox? We find, furthermore, that, as a general rule, the vocabulary of the male is larger than that of the female. Is there any explanation for this phenomenon? Then, too, how are we to explain the great discrepancy which these tests which have just been described

bear toward the experiments of others in reference to the total size of vocabularies? These problems and others of a similar nature will be discussed in Part IV.

CONCLUSIONS.

PART IV.

As has been previously mentioned, we find in the field of vocabulary research a wide divergence of opinion. It is only by the generalization of data collected from various sources that one is able to arrive at trustworthy conclusions. Consideration must also be given to the methods employed by the investigators. Let us review briefly several of the most important of these methods.

In determining the vocabulary of an infant, doubtless the most satisfactory process is that of recording all the words used by the infant during a period, a month for instance; taking care that artificial occasions are produced for the use of such words as it is felt the child may know but has failed to use spontaneously. This method, or a variation of it, is the only one feasible for the study of the vocabulary of a very young child. It is obvious that the infant cannot define words in terms of other word symbols, nor can he recognize definitions of words in terms of other words. Hence the only adequate manner in which the vocabulary of the child up to the fifth or sixth year can be determined is to record the words actually used by him.

The method of recording the words actually used is of little value for investigations beyond the age of infancy. For after the child has reached the age

of five or six he knows a great number of words which he has no occasion to use in ordinary conversation. Therefore a different method must be employed for the calculation of his vocabulary. To the writer it seems that in order to record with even satisfactory approximation the child's vocabulary after he has passed the age of infancy, resort must be had to the dictionary. For the child in the lower grades a small dictionary, such as the Elementary School Edition of Webster's, should be efficient. The investigator should present the words, one at a time, to the child, asking him to define, or explain, each word with which he is familiar. Such words as it is felt the child does not know may be omitted from the test. Until the child has reached an age at which he is able to recognize in print practically all the words which he knows, the experiment must be conducted vocally, on the part of both the instructor and the child. A less accurate method than that of taking all the words in the dictionary is to take a representative list and calculate the total vocabulary from the number of words known in this list. The latter process is, except in the case of thorough individual tests, the most satisfactory, especially for older children and adults.

As the child grows older a larger dictionary should be used. For adults the largest dictionary available will give the most reliable results. For the older child and the adult the experiment may be conducted either orally or in writing or print. If the individual who is being tested is required to give definitions for the words, the final result will be the number of words which he can actually define. This might, for want of a better term, perhaps be called his absolute vocabulary. However, every person is more or less familiar with a number of words which he can not define but would recognize in context. These words, together with those which he can actually define, would constitute his understanding vo-

cabulary.* The term "practical vocabulary" may be applied to either of these two kinds of vocabularies —depending entirely upon the manner of considering the term. For the former, or absolute, vocabulary is practical in one sense—that of individual usage; while merely for the purpose of individual understanding, the latter vocaublary is to be considered practical.

For the estimation of an individual's absolute vocabulary the greatest difficulty to be encountered is in regard to the accuracy of his definitions. It is often extremely hard to judge by a person's definition of a word whether or not the meaning of the word is clear to him. The system of having the subject merely mark those words with which he is familiar is very unreliable and should not be used without an adequate means of checking the errors.

In order to estimate an individual's understanding vocabulary a system similar to that used by the writer will probably prove to be the most satisfactory. In this particular instance definitions were supplied for only a portion of the words. The remainder are so unusual, however, that even though suggestions had been offered few of the words would have been known to the average person. Furthermore, these words for which definitions were not supplied are for the most part of such a nature that in order to be able to understand them, except in a vague, general way, one must be able actually to define them.

Note: Certain preliminary investigations and observances lead the writer to believe that a reasonably adequate

*Dr. G. Stanley Hall apparently recognizes a very similar distinction: "He (the child) may live as a peasant, using, as Max Muller says many do, but a few hundred words during his lifetime, or he may need 8,000, like Milton, 15,000, like Shakespeare, 20,000 or 30,000, like Huxley, who commanded both literary and technical terms; while in understanding, which far outstrips use, a philologist may master perhaps 100,000 or 200,000 words" (23).

test for determining the size of an individual's vocabulary could be obtained by simply applying a thorough dictionary test of all the words beginning with the letter *c*; the result multiplied by 10 should give a fairly close approximation to the total vocabulary size.

It is the writer's hope at some future date to be able to present a scale of perhaps one thousand words, arranged in order of their difficulty, beginning with the simplest words of infancy and ending with the most complex words of maturity. The scale could be graded in terms of percentage or otherwise. In order to conduct a vocabulary test with this scale, the experimenter would merely determine at what position on the scale the individual tested could no longer give adequate definitions; it goes without soying that allowances would need to be made for isolated words, both known and unknown. A suggestive list somewhat of this sort is to be found in the appendix. Preliminary investigations with this list have been very encouraging.

Let us now review briefly the results of the tests which have to do with size of vocabulary in comparison to scholastic grades. Doran believed that those who ranked high in their classes had a good vocabulary, and that those who had a good vocabulary ranked high in their classes. Kirkpatrick found in general a tendency toward positive correlation between size of vocabulary and class records (33). Whipple arrived at similar conclusions (59). Kirkpatrick even suggests that vocabulary tests might be substituted for college entrance examinations (33). Babbitt actually employed a vocabulary test in connection with examination for entrance to, and graduation from, certain courses in German (1).

The results of the experiments conducted at Colorado College prove conclusively that the substitution of a vocabulary test for examinations to determine a person's qualifications in regard to scholastic status as recorded in the present system of grading would be absolutely futile. Individuals making very high grades are to be found near the bottom as well as at the top of the vocabulary scale. Other individuals whose grades are below the passing mark rank far above the average in size of vocabulary. Results of classes overlap, even through such a wide

range as that between the high school freshmen and the college seniors. Though there is a very general positive correlation between size of vocabulary and scholastic grades, the individual variations are too common and too great to permit conclusions to the effect that a person having a large vocabulary will make good grades, or vice versa.

How then are we to explain the paradoxical statement that vocabularies, as well as grades, are an indication of intellect? Since a word is the sign of an idea, and since ideas make for intellect, certainly the more words, and combinations of words, which an individual has at his command, the greater will be his range of intelligence. But this is general intelligence. Class grades are an indication of applied, or specific, intelligence. Herein we see the explanation for the lack of positive correlation between grades and size of vocabulary. Though both indicate intelligence, the intelligence in the one case is specific while in the other it is general. A person of comparatively low general intelligence may, by thorough application to the particular subjects under consideration, make most excellent grades. Whereas a person ranking high in general intelligence may encounter either a real or an imaginary obstacle in the way of his making high marks in the class room. In certain cases it may actually be impossible for a person of high intellect to apply his intelligence to the particular subject under consideration with sufficient specificity to rank high in that subject. Scholastic grades are an indication of the specific application of intelligence. This intelligence may be either general or specific in itself. Ordinarily we would expect the person with high general intelligence to be able to apply himself specifically with more effectiveness than the person with a low rate of general intelligence. This supposition is confirmed by the fact that in a very general way there is a positive correlation between size of vocabulary and grades.

In regard to sex influences, other investigators have furnished us with very little reliable data. Several authors agree that there seems to be a tendency toward a larger vocabulary for the man than for the woman. The boy, except in the case of infants, is thought to know more words than the girl. Among infants, it is generally agreed, the girl has the larger vocabulary. It is commonly known that girls usually learn to talk at an earlier age than do boys. Though data to prove these statements is lacking, we may doubtless accept them as reliable.*

According to the results presented in the tables of Part III the vocabulary for the male is, in general, larger than that for the female. In only one class test, that of the high school seniors, was the reverse true. Neither of the high school groups, owing to the manner of selection, is to be considered adequately representative. Considering the college students alone the preponderance of the male's vocabulary over that of the female is quite marked. We are justified in concluding that, in general, the man has a larger vocabulary than the woman.

The girl learns to talk at an earlier age than does the boy, and thus at the beginning has the lead in the race for vocabulary. The boy, however, after once acquiring speech, develops in linguistic powers more rapidly than the girl. He becomes of an inquisitive turn of mind, spends much of his time out of doors, comes into contact with more varied experiences than does his sister, and consequently becomes the possessor of a larger vocabulary. The girl is more quiet and reserved than the boy; she plays with dolls while her brother is, though necessarily in a small way, coming into contact with the outer world; the girl, being less inquisitive, consequently learns fewer general terms; her tendency is to concentrate on the things most closely related

*Whipple (59) and Hall (23) have both shown that there tends to be a superiority of range of information in the male.

to her. Thus, even in childhood we find a tendency on the part of the male to generalize, while the female specializes. This tendency is retained throughout life. Hence the male has the larger vocabulary, whereas the female apparently tends to make better scholastic grades.*

As was pointed out in Part II, there is a wide divergence in the results supplied by various investigators in regard to total size of vocabulary. Where the experiments have been carefully conducted the results show more uniformity than is at first obvious. Kirkpatrick(33) and Whipple (59), employing similar tests and basing their calculations upon dictionaries of the same size, obtain closely agreeing results. Babbitt(1), using a dictionary containing over 100,000 words, finds the average vocabulary of college sophomores to range from 50,000 to 60,000 words. When we consider that the dictionaries used by Kirkpatrick and Whipple contained less than 30,000 words the results obtained by Babbitt are no higher than is to be expected. The larger dictionary contains, in addition to a number of entirely different words, more forms of the same fundamental words. The almost inconceivably large vocabulary of an adult is due largely to the multiplicity of words formed from the same root.

In using a still larger dictionary than was used by Babbitt it is to be supposed the results would be considerably higher.** In the writer's opinion, the lowest possible estimation based upon the results of the tests conducted by him places the average college student's vocabulary at 85,000 words. This is doubtless far too low, as the figures are computed

*A somewhat similar explanation is given for the apparent preponderance in vocabulary size of the Speyer School children over those of other schools. Cf. page 38.

**Later data, concerning the tests conducted at Speyer School, validates the above statements admirably. Use of a larger dictionary almost doubled the apparent size of vocabulary of grade children(10). Cf. page 38.

upon the basis that the test represents only 250,000 words, whereas the dictionary, exclusive of proper names, contains about 375,000. It seems scarcely too much to say that, at the time of graduation, a college student should be in command of 100,000 words, the estimation having for its basis the dictionary vocabulary, exclusive of biographical and geographical terms. In addition to the 100,000 words, more or less, which constitute the individual's vocabulary as estimated, we must not lose sight of the fact that he knows countless words which do not appear in any dictionary. Thus there are thousands of familiar biographical and geographical names. The writer has taken no consideration of such terms in forming his estimations, for the reason that he believes it to be impossible to calculate with even vague approximation the total number of biographical and geographical words known to an individual. Biographical and geographical terms making for general intelligence vary for different persons and in different localities. Consider the immense number of purely local proper names known to every one in his particular locality which, for that individual and that locality, are an indication of general intelligence. Therefore, to the 100,000 word vocabulary let us add all the names of persons and places familiar to the individual; let us also add the names of characters of books; names of personified objects, as ships for instance; brands of goods; slang expressions and colloquialisms; and a host of other familiar terms which are not to be found in any dictionary—and the result is an indefinitely large, truly appalling, vocabulary. The number of words which an intelligent individual has at his command is simply terrific.

Note: It might be well here to suggest that perhaps at some future date statistics may be available to show the rate of vocabulary increase in terms of per cent from year to year. Unquestionably the greatest per cent of increase is to be found in the earlier years of a child's life. The average child should have a vocabulary of about 10 words at one year of

age. During the second year this number should be increased to 450 or 500, giving an increase of 4500 to 5000 per cent. The per cent of increase during the third year apparently has dropped to 200 or 250. Indications lead one to believe that during the fourth year the per cent of increase has fallen to about 75. The actual number of words gained each year, however, shows a distinct increase over the number gained during the previous year.* It is probable that this decrease in per cent of gain and increase in actual number of words gained continues through the period of distinct mental expansion of the individual—that is, until 25 or 30 years of age. It is also to be supposed that there will be a decrease in acceleration of both decrease of per cent of gain and increase of actual numerical gain from year to year. It seems, as may be ascertained from the tables in Part III of this discussion, that the per cent of gain from year to year during the high school and college period varies from 5 to 10; while the actual numerical gain yearly is probably in the neighborhood of three to five thousand words. This does not mean that during one year the individual will actually come into contact with and learn from three to five thousand new verbal terms; it means, rather, that he will have this remarkably large gain *in potentiality and not in actuality.* In a great many cases each new word learned carries with it *in potential* a number of other words founded upon the same root or symbol. As a homely example let us take the term "health"; at once we have the potentials of such words as: healthless, healthlessness, healthsome, healthsomeness, healthward, healthful, healthfully, healthfulness, healthy, healthily, healthiness, unhealthy, unhealthily, unhealthiness, unhealthful, unhealthfully, unhealthfulness, etc., *ad nauseam.* It will be seen that the acquisition of a new prefix or suffix will, in general, have an even more startling effect upon the size of vocabulary.

By a comparison of Table XXIV to Table VI it will be seen that the results obtained in the experiments at Colorado College are about four times as great as those obtained by Kirkpatrick for corresponding classes. Though Kirkpatrick's results show a very uniform increase in size of vocabulary from the second grade to the college, his figures are doubtless too low. A rough correction might be made by multiplying by four the figures which he presents for the high school, normal school, and college. Corrections for the vocabularies of the grade pupils should perhaps not be so great, though what

*Cf. pages 26 to 28.

this correction should be it is difficult to say without more complete data.

Note: Several months after the above was written an article, already referred to, (page 38), which describes the results of tests carried on at Speyer School appeared in School and Society(10). In these tests the use of a 44,000 word dictionary indicated an average vocabulary of 27,918 words for the children of the fifth, sixth, seventh and eighth grades. Kirkpatrick's average for the same grades is 9,805. In the light of this additional data, especially when it is considered that the Speyer results are probably too low rather than too high, it seems only reasonable that an approximate correction for the vocabularies of grade pupils as determined by Kirkpatrick could be obtained by multiplying his figures by 3 or 4.

In concluding this discussion on vocabularies it is scarcely necessary again to emphasize the important role which words play in our lives. A word may aptly be called an incarnate thought. Without words civilization would have been impossible. The power of words is incalculable. Their influence is illimitable. Their mysticism is entrancing.

A word is sufficient to lighten the burden of the weary, to uplift the depressed, to bring joy to the sorrowing; a word may blast the fondest hopes, and darken the brightest life. Words of love increase life's blessings, and words of hate augment life's curses. Words are sufficient to express the profoundest thoughts of the philosopher, or the simplest wants of the little child. Words convey the sublimist emotions of the poet, and the rudest impulses of the swain. A word may soothe the tumultuous mob and bring peace and happiness to the populace. A word may plunge nations—the entire world—into chaos. Words transport us from the present to the dimness of the fading ages of long ago, or whisk us in an instant to the beautifully dreamy times that are to be. A word erases the finite and replaces it with the Omnipotent.

APPENDIX.

LABORATORY TEST SHEET A.

In this list each word is followed by four definitions, of which ONE is correct. Check the correct definition of the words familiar to you. For every one incorrectly marked a deduction will be made from those correctly marked.

Aabec
(a) A boat used by the natives of the Kongo region.
(b) An ape-like animal of South America.
(c) An Australian medicinal bark said to promote perspiration.
(d) A short spear used by the Eskimos.

Absolute
(a) Not solvent.
(b) To acquit or pardon.
(c) Complete in itself.
(d) Not present.

Accidental
(a) Without hesitation.
(b) Being shortened.
(c) Refraining from excess.
(d) Happening by chance.

Actio
(a) The action of radium rays.
(b) A public, written declaration.
(c) An invoice of merchandise for court purposes.
(d) A right enforceable by law.

Addressee
(a) One who is addressed.
(b) One who addresses another.
(c) That portion of a name and address which pertains to the person alone.
(d) A small rat-like animal of Australia.

Adjust
(a) An Italian fisherman.
(b) Charge on oath.
(c) To cause to fit.
(d) To scrutinize.

Adroit
(a) Dexterous.
(b) Awkward.
(c) A fundamental tone into which others blend.
(d) Without regard to rules and regulations.

Affect
(a) Belongings.
(b) State or condition.
(c) Unseemly.
(d) One who pretends or feigns.

Aft
(a) Always remembered.
(b) A spar or mast.
(c) Often.
(d) Apt or efficient.

Agglomerant
(a) A substance causing the particles of a mixture to form lumps.
(b) A person with defective speech.
(c) Pungent.
(d) An abbreviated address.

Ahead
(a) To cut off the head of anything
(b) The second of a series.
(c) To outdistance.
(d) At the head.

Air
(a) Carbon dioxide.
(b) The atmosphere.
(c) A small shrub found in Asia.
(d) A weapon used by aborigines.

Air-tight
(a) Not allowing air to pass.
(b) Not permeable to any gas.
(c) Air charged with ammonium.
(d) Provided with a cover.

Alder
(a) A fool.
(b) Older.
(c) Egg sampler.
(d) Separation of whey from milk.

All
(a) In complete or highest degree.
(b) A shoemaker's instrument for punching small holes.
(c) A canoe in use on the Great Lakes.
(d) To produce astonishment.

Alternate
(a) One chosen to act in the place of another.
(b) A colleague.
(c) To provide amusement.
(d) One who falsifies.

Amalgamable
(a) That which may be likened to another thing.
(b) Capable of being mixed or compounded.
(c) Loveable.
(d) Without manifestation.

Americanism
(a) Any animal native to America.
(b) The habits or customs of North American Indians.
(c) The fauna of the Western Hemisphere.
(d) A word or phrase peculiar to the people of the United States.

Amorrow
(a) Before the morrow.
(b) On the morrow.
(c) After the morrow.
(d) To mortify.

Analog
(a) A compendium of words and phrases.
(b) A term similar to, or resembling.
(c) An unlike term.
(d) A supplementary list.

Ancestral
(a) Having to do with a later type.
(b) Without regard to precedent.
(c) Pertaining to an earlier type.
(d) Pertaining to blood relationship.

Anemometer
(a) One who speaks profusely.
(b) An instrument for measuring the force or velocity of wind.
(c) An officer sent to plead compromise.
(d) A measure of liquid pressure.

Angler
(a) One who fishes with rod, line, and hook.
(b) One who pretends.
(c) The steersman of a scow.
(d) A pitcher of curves.

Anti
(a) A descent.
(b) Before.
(c) A bringer of ill tidings.
(d) One opposed to any proposed or enacted policy.

Antiparallel
(a) A straight line and a curved line side by side.
(b) A perpendicular line or surface connecting two parallel lines or surfaces.
(c) One of two or more lines or surfaces making equal angles with two others, taken in contrary order.
(d) The projection of a curved surface upon a plane surface.

Anxious
(a) Extremely joyful.
(b) Subject to painful or disturbing suspense.
(c) Without forethought.
(d) In a provoking manner.

Apices
(a) A form of Greek architecture.
(b) Plural of apex.
(c) A small temple.
(d) A species of finch.

Apprehensive
(a) Thoughtful.
(b) Pertaining to laziness.
(c) Anticipative of evil.
(d) Capable of understanding.

Aqueous
(a) Compounded with acid.
(b) Watery.
(c) Airy.
(d) Having to do with the brain.

Architecture
(a) The art of designing and constructing buildings.
(b) One who plans and designs buildings.
(c) A landscape gardener.
(d) Having a beautiful contour.

Areach
(a) Coupling of a wagon.
(b) Noise made by a double reed whistle.
(c) To jump.
(d) Extend.

Arm
(a) To provide with food.
(b) A small animal similar to the lemur.
(c) A tendency to swoon.
(d) Any weapon.

Arrant
(a) Victorious.
(b) Notoriously bad.
(c) One who pilfers.
(d) Playing the part of a dandy.

Artful
(a) Characterized by cunning.
(b) Beautiful or shapely.
(c) Having a desire to paint or sketch.
(d) Quick of movement.

Associate
(a) A kind of iron ore.
(b) Having a metallic lustre.
(c) Pertaining to sedition.
(d) United.

Atom
(a) A contraction of "At Home."
(b) One of the hypothetical indivisible parts of which all matter is supposed to be formed.
(c) A small camera.
(d) A primitive cell.

Attorney-general
(a) The chief law officer of a government.
(b) The officer second in command of an army.
(c) The attorney for a general in a law suit.
(d) A judge of the supreme court.

Augury
(a) The process of boring holes.
(b) Intensification.
(c) The art of foretelling by signs or omens.
(d) Having to do with the ear.

Authorized
(a) Formally sancitioned.
(b) Composed by an author of repute.
(c) Prohibited or prevented from action.
(d) Written with accuracy.

Ave
(a) Evening.
(b) State of being tired.
(c) Sweet or gentle.
(d) A word of salutation.

Avow
(a) To use profanity.
(b) An evergreen tree found in central America.
(c) To promise.
(d) To nullify.

Backwoods
(a) A species of oak.
(b) Any rural and uncultivated region.
(c) Fallow land lying beside a forest.
(d) The inner portion of a forest.

Bailee
(a) A dipper used for dipping water from a boat.
(b) A Hawaiian land-toboggan.
(c) One who receives certain personal property in trust to perform some act in respect to it.
(d) A species of salt-water tortoise found in southern waters.

Bale
(a) To dip water from a boat.
(b) That which causes ruin or sorrow.
(c) Security given in order that a person may be set free.
(d) A decision.

Balsamous
(a) Having the qualities of balsam.
(b) A kind of petrified wood found in certain sections of North America.
(c) Gentle and soothing.
(d) Said of lumber of a loose texture.

Bar
(a) An honest fellow.
(b) A C. G. S. unit of atmospheric pressure.
(c) Bread made by fermentation.
(d) A punch for making four or more holes in paper.

Bargained
(a) Borrowed.
(b) Sold at below cost.
(c) Negotiated.
(d) Brought on a barge.

Baronetage
(a) The income derived by a baron from his lands and vassals.
(b) The rank or state of a baronet.
(c) A long reed musical instrument with seven keys.
(d) A crown of the same height all around.

Baseball
(a) A black ball.
(b) An evil fellow.
(c) A marker used to show the destination for a foot race.
(d) A game played with bat and ball, named from the four bases which mark the course each runner must take.

Bassoon
(a) A stick fashioned for the use of police.
(b) A wooden reed-instrument with curved mouth-piece.
(c) The lowest line on a musical staff.
(d) To fasten by means of brads.

Battening
(a) The putting on of scantlings.
(b) Damming a river by building from both sides toward the center.
(c) To strike a ball with a bat.
(d) Acting foolishly, like a bat.

Baubling
(a) Paltry.
(b) Dreamily speaking.
(c) Disconnected discourse.
(d) Sounds like those coming from hollow vessels.

Bear
(a) To hide in a snow drift.
(b) To uncover.
(c) A dust explosion.
(d) To force down the price of.

Beechen
(a) To turn white by exposure.
(b) A small deformed bee.
(c) Pertaining to the beech-tree.
(d) Whining like a dog.

Beholden
(a) Contained in a measure.
(b) To keep an object that is not prized.
(c) Held under obligation.
(d) Trumpery.

Bellmouth
(a) A large South American moth.
(b) Hilarious.
(c) To shape at the mouth or muzzle like a bell.
(d) Lucky coin.

Benefice
(a) Soft mush-ice.
(b) An ecclesiastical living or preferment.
(c) A cheerful face.
(d) A weight to help lower a diver.

Bereave
(a) To deprive.
(b) To bind with hoops.
(c) A brace in cast iron.
(d) Short of breath.

Best
(a) Mold in which brass castings are made.
(b) A polishing brush.
(c) Fine sand to pack in with course gravel.
(d) The most excellent thing.

Billing
(a) Two pendulums swinging in unison.
(b) Cording pig iron in sacks.
(c) Putting weights in order.
(d) The act of making out a bill.

Black
(a) Having little or no power to reflect light.
(b) A sinner.
(c) Chimney choking with smoke.
(d) Over-indulgence.

Blame
(a) Short arm on a mast.
(b) Indigestible food.
(c) Support for a stone.
(d) The act of censuring.

Blemished
(a) Censured.
(b) Rough surfacing of a file.
(c) Cut off abruptly.
(d) A hopeless saint.

Block
(a) Fulcrum end of a lever.
(b) A dull feeling over the eyes.
(c) That which hinders or obstructs.
(d) A sign in musical composition.

Blubber
(a) A boy with large eyes and small mouth.
(b) Broad band running half-way around a coat.
(c) Strong.
(d) The layer of oil-yielding fat beneath the skin in cetaceans.

Bolt
(a) A nearly horizontal cylinder covered with silk or other fabric for separating the flour of wheat from the hull or bran.
(b) The large end of a pear.
(c) The largest man in a crowd.
(d) Husks of nuts, fruits, grain, etc.

Bone-cartilage
(a) Old bones that are used in the manufacture of fertilizers.
(b) Cars used for hauling refuse.
(c) A paste made from animal glue.
(d) The gelatinous matrix left after dissolving out the calcium salt of bone with dilute acid.

Brachia
(a) Upper part of wind-pipe.
(b) The weight on a pile driver.
(c) Processes resembling arms.
(d) Gases arising from stagnant water.

Bran
(a) Marking with a hot iron.
(b) To borrow.
(c) To reduce to scrap.
(d) The crow.

Breacher
(a) A breaker.
(b) The hip part of a horse's harness.
(c) A cheap detective.
(d) The large rope with which a vessel is tied.

Breathable
(a) A board on which bread is displayed.
(b) Fit to breathe.
(c) A husky sound or voice.
(d) Broad-minded religiously.

Bridgewater
(a) Water lying under a bridge.
(b) A broadcoth once manufactured at Bridgewater, England.
(c) Tears shed at the loss of a game of cards.
(d) A beverage made of oatmeal and water.

Brood
(a) Blood-clot.
(b) Hard-baked stale bread.
(c) Having young.
(d) A course heavy cloth.

Brush
(a) Twelve logs fastened together in a raft.
(b) The front seat in an open boat.
(c) To touch with a light stroking movement.
(d) To argue vehemently.

Buckish.
(a) A rapid muscular activity.
(b) Delightful.
(c) A sharp, acrid taste.
(d) Foppish.

Build
(a) Form of construction.
(b) A picture.
(c) A broad substantial foundation.
(d) A very narrow waist or corset.

Burden
(a) A poisonous berry.
(b) Something often repeated or dwelt upon.
(c) The metal part of a loose-leaf binder.
(d) The last hard piece of leather on a shoe heel.

Burro
(a) A very small donkey.
(b) The covering of a chestnut.
(c) Lumps of rust on old iron.
(d) A rough, stony path.

Bust
(a) The human chest or breast.
(b) Soiled with clay.
(c) The pithy center of corn cobs.
(d) The metal binders on smoking-pipes.

Butler
(a) A designer of buttons.
(b) A man servant who has charge of the dining-room, etc.
(c) An expert bell founder.
(d) A device for drawing liquors from casks into bottles.

By
(a) To purchase.
(b) Near.
(c) Sleepiness.
(d) A Japanese sweetheart.

Cable
(a) To insult by laughing.
(b) Profuse flow of saliva.
(c) To send by submarine telegraph.
(d) A nervous twitching of the lips.

Calf
(a) The rounded prominence of the hinder part of the human leg, below the knee.
(b) The crying of a large boy.
(c) To tease.
(d) The supporting timbers of a dormer-window.

Canage
(a) This age in which so much canned goods is eaten.
(b) A factory in which canned goods are made.
(c) A bloody encounter.
(d) Rent in kind.

Canopy
(a) An overhanging screen or shelter.
(b) A seat on which two can sit.
(c) A pale pink precious stone.
(d) A very soft, yet durable, tin.

Cartilage
(a) Gristle.
(b) A packing material made from the fibers of banana stalks.
(c) Constant good nature.
(d) The act of snubbing.

Cast-iron
(a) A metallic boat.
(b) Brittle.
(c) Scroll forms for rock chiseling.
(d) Made of cast iron.

Categorical
(a) A howling noise.
(b) An absolute proposition.
(c) Fictitious.
(d) A proposition to be proven.

Cathead
(a) To open a wound by means of a rubber tube.
(b) Excessive secretion by the kidneys.
(c) A large round spotted bean.
(d) To make fast to the capstan.

Cavil
(a) To find fault with captiously.
(b) To ring by means of a hammer.
(c) Heavy breathing.
(d) The small sharp lip on an auger.

Cella
(a) A cavity.
(b) A musical stringed instrument.
(c) A small dish for spices.
(d) A machine for forming chair seats.

Center
(a) A mythological animal covered with feathers.
(b) A gift booklet.
(c) A needle for making holes in wax.
(d) The middle.

Certification
(a) Distinction.
(b) Notification.
(c) Arranging according to class.
(d) Amelioration.

Chain
(a) To tug fiercely.
(b) A succession of events.
(c) A variegated Indian blanket.
(d) A string of interlinked rings or links.

Chameleon
(a) To provide with fruit in season.
(b) A poisonous mushroom.
(c) A family of limicoline birds, including plovers.
(d) An American anolidid or iguanid that has the power of changing its colors.

Charge-sheet
(a) Daily register of charges and arrests against prisoners.
(b) A monthly bill, or dun.
(c) In an account book, a specification of merchandise bought on credit.
(d) In printing, a corrected proof-sheet.

Chaste
(a) The indentation at the butt of a knife blade.
(b) To punish.
(c) Virtuous.
(d) A small owl found in Porto Rico.

Chiasm
(a) An abyss.
(b) A decussating or X-like commissure.
(c) A nervous disease characterized by violent trembling.
(d) An antelope found in Asia.

Chimerize
(a) To make horrible.
(b) To clothe a new-born babe.
(c) Use discretion in judgment.
(d) Entertain absurd fancies.

Chirpling
(a) An ornamental carving on a dresser.
(b) A U-shaped moulding.
(c) A little chirper.
(d) Producing a succession of sharp, quick sounds.

Chromosphere
(a) A lens made of glass which contains chromium.
(b) A relatively thin layer of incandescent red gas surrounding the sun.
(c) An instrument for determining relative humidity.
(d) A glass globe used by spiritualists in their profession.

Chuck
(a) A river fish, similar to the salmon.
(b) A sub-order of ctenoidians.
(c) A short sudden noise.
(d) Brittle.

Church
(a) To preach.
(b) A building dedicated to Christian worship.
(c) A plow equipped with a colter.
(d) To give alms.

Circumcision
(a) Spiritual purification.
(b) Encircling.
(c) A wave of the voice embracing both a rise and a fall on the same syllable.
(d) Act of undulating.

Citrous
(a) Having a yellow color.
(b) Having the qualities of citrine.
(c) Pertaining to citrus.
(d) Possessing acridity.

Clip
(a) To name.
(b) A dandified young man.
(c) An appliance that grips.
(d) A canter.

Coak
(a) Word used to call horses.
(b) An oxide of iron.
(c) A coal from which the volatile constitutents have been removed.
(d) A fossil sea shell.

Cobby
(a) Headstrong.
(b) A cab-driver.
(c) Spick and span.
(d) Pilot of a barge.

Cochineal
(a) A protoxide of barium.
(b) A dyestuff made from certain insects.
(c) In Great Britain, a second king at arms.
(d) A Bohemian folk-dance.

Code
(a) To make flattering remarks.
(b) In music, the close of a composition.
(c) A nuciferous tree of the West Indies.
(d) Shoemakers' wax.

Cogger
(a) A clevis.
(b) One who makes gear-cogs.
(c) A rustic, or miserly man.
(d) One who shirks his duty.

Coin
(a) A gift.
(b) A supercilious youngster.
(c) An inventor of words.
(d) A piece of metal or alloy for use as money.

Colorable
(a) That which may be colored.
(b) To be regretted.
(c) A genus typical of a certain family of crinoids.
(d) Pertaining to an unruly mob.

Compart
(a) Studded with nails.
(b) Condensed.
(c) Partition.
(d) The forecastle of a vessel.

Compelled
(a) Hindered.
(b) Shaped like a fresh-water eel.
(c) Involuntary.
(d) Foppish.

Compositor
(a) More compact.
(b) One who instructs.
(c) One who or that which angers another.
(d) One who sets type.

Conception
(a) A literary style overloaded with double meanings.
(b) Apprehension of anything by the mind.
(c) Capable of perception.
(d) An analogous term.

Conferential
(a) Private, or trusting.
(b) Pertaining to a meeting for deliberation.
(c) Having great influence.
(d) A form of sonnet used by early writers.

Congratulation
(a) Punishment unjustly inflicted.
(b) A resemblance.
(c) Being confined to certain limits
(d) Complimentary expression of sympathetic satisfaction.

Connivent
(a) Diverging.
(b) Converging or coming into contact.
(c) Part of a circumference.
(d) A circle in juxtaposition to two parallel lines.

Consist
(a) To withhold.
(b) To be composed or constituted.
(c) To continue firmly or steadily in any course undertaken.
(d) Part of a ship's mast.

Constriction
(a) Perambulation.
(b) Deprivation.
(c) Act of checking.
(d) Local or transverse contraction

Continental
(a) Characteristic of a continent.
(b) Local.
(c) By force of habit.
(d) A variety of iron pyrites.

Contralto
(a) Second bass.
(b) A market-place.
(c) Pertaining to a part between alto and soprano.
(d) Pertaining to the lowest part for the female voice.

Contribution
(a) Act of dabbling in water.
(b) A plain-song.
(c) State of being varied by modulation.
(d) The act of giving for a common purpose.

Conviction
(a) Complaint.
(b) The embryo of a plant.
(c) Annullification.
(d) The state of being convinced.

Corn
(a) The seeds of cereal plants used for food, as maize, barley, rye, wheat, and oats.
(b) Plash.
(c) A tree of the family Vochysiaceae.
(d) A sore toe.

Corosif
(a) A species of sea-weed.
(b) Talkative.
(c) Having the power of corroding.
(d) A tree bearing small, poisonous fruit.

Countenance
(a) Approve.
(b) To frustrate.
(c) To unite.
(b) The quality of a thing which makes it possible to be believed.

Coupled
(a) Separated.
(b) Abbreviated.
(c) Versified.
(d) Conjoined.

Cow
(a) To cause to be afraid.
(b) A courtier.
(c) To uplift.
(d) To provide shelter for wild deer.

Crank
(a) A decollette gown.
(b) A cog-wheel.
(c) Possessing stability.
(d) Unsteady.

Creditability
(a) The state or quality of being praiseworthy.
(b) An instrument for measuring the intensity of colored light.
(d) Utilitarian.
(d) Disqualification.

Crib
(a) To be clever.
(b) The entrance to a Chinese temple.
(c) A course sieve.
(d) An angler's basket.

Croche
(a) A joining together.
(b) A knob at the top of a deer's antler.
(c) Galena.
(d) To shoot with accuracy.

Cross
(a) Over or through.
(b) Tranquil.
(c) To stutter.
(d) A bouquet of violets.

Cruciferous
(a) Fond of nuts.
(b) Bearing a cross.
(c) Having a long and thin neck.
(d) Having the qualities of molten metal.

Crystalliform
(a) A variety of copper ore.
(b) Allotropic.
(c) A sand-lily.
(d) Having a crystalline form.

Cupboard
(a) A safe equipped with a combination lock.
(b) A kind of sword used in mediæval times.
(c) To hoard in or gather into a larder.
(d) To glaze pottery.

Current
(a) Having the quality of roughness.
(b) A continous movement in the same direction.
(c) The fruit of a well-known shrub much used for jelly.
(d) Pertaining to the past.

Customance
(a) The office or offices where duties are collected.
(b) Habit.
(c) Any performance.
(d) To permit.

Da capo
(a) From the beginning.
(b) To the end.
(c) Out of sight.
(d) Without the head.

Daub
(a) A shrub of the genus Ribes.
(b) To utter a wish of evil against one.
(c) Besmear.
(d) The common wren.

Debate
(a) A shrimp.
(b) To dissuade from a set purpose.
(c) Good news.
(d) Argumentation for and against.

Decagon
(a) A brewing vat.
(b) A figure with ten sides and ten angles.
(c) A figure with many sides and many angles.
(d) An isosceles triangle in juxtaposition to a square.

Declare
(a) A monocle.
(b) To make known.
(c) Denunciation.
(d) A certification as to value.

Deeducational
(a) Pertaining to education for both sexes.
(b) Denial of knowledge.
(c) Pertaining to a removal or taking from.
(d) That which tends to hinder or nullify the work of education.

Deformation
(a) Change of form.
(b) The act of condemning.
(c) Malevolent accusation.
(d) Purification.

Deleble
(a) Capable of being erased.
(b) That which may be eaten.
(c) Pleasing to the taste.
(d) A Hawaiian surf-boat.

Demagogic
(a) Having narrow and set religious opinions.
(b) Given to unprincipled political agitation.
(c) Pertaining to teaching.
(d) Absolute in power.

Despite
(a) Short or transient.
(b) To show contempt for.
(c) To remove all traces of hatred.
(d) Determined.

Desulphurize
(a) To compound with sulphur.
(b) Give off fumes.
(c) To free from sulphur.
(d) Denounce with vehemence.

Diamond
(a) A circle.
(b) To mine coal.
(c) False testimony.
(d) A mineral consisting essentially of carbon crytallized in the isometric system.

Dibasic
(a) Containing two bases.
(b) Containing two atoms of hydrogen replaceable by a base or basic radical.
(c) Pertaining to the terminals of an electric battery.
(d) Pretentiousness.

Die
(a) A device for cutting hay in the stack or barn.
(b) A small sunfish.
(c) To show partiality.
(d) To mold or form with a metal former or device for shaping.

Diminish
(a) To shut out of sight.
(b) To reduce in any way.
(c) Ranking high in estimation.
(d) To till the soil.

Directness
(a) Straightness.
(b) Eligibility.
(c) Dampness.
(d) A hyperbola.

Discarnate
(a) In the flesh.
(b) To remove temptations.
(c) Not having a physical body.
(d) A hook by means of which a kettle is hung in an open fireplace.

Disclamation
(a) An interjection.
(b) To mismatch.
(c) A disavowal.
(d) A speech made in public.

Diseased
(a) Pertaining to phrenology.
(b) A corpse.
(c) Unhealthy.
(d) Led into error, or cheated.

Dismayed
(a) Filled with consternation.
(b) That which has been established by precedent.
(c) Having an eager desire.
(d) Ingenuousness.

Distinctive
(a) Relating to power.
(b) Distinguishing.
(c) A lobster-salad.
(d) Having been extinguished.

Diversiflorous
(a) Said of a land having varied vegetation.
(b) Having flowers of two or more kinds.
(c) Motley.
(d) To row.

Dock
(a) To move in a short, jerky manner.
(b) In chemistry, any radical of double valency.
(c) An increase in wages.
(d) An animal's tail cut short, or bobbed.

Dolphinet
(a) A female dolphin.
(b) A colonial dance.
(c) A musical instrument made of reeds.
(d) A Russian folk-dance.

Double
(a) A commoigne.
(b) A beautiful garden of roses.
(c) To add two.
(d) Something that is twice as much.

Downward
(a) On an elevated plane.
(b) From a higher to a lower level.
(c) A journey.
(d) To conceal one's identity.

Dressmaker
(a) A stringed instrument of music
(b) A person who makes dresses.
(c) In music, an interval comprehending two tones.
(d) To disregard.

Drone
(a) The male of the honey-bee or other bee.
(b) A number of beetles taken collectively.
(c) A covetous, sordid man.
(d) A pickpocket.

Dry
(a) A state or condition of lacking moisture.
(b) Indivisibility.
(c) Thorough introspection.
(d) Forward, in succession.

Dunness
(a) Swarthy coloring.
(b) State or quality of being bright.
(c) Wife of a duke's butler.
(d) Corruption.

Dyspepsia
(a) A substance secreted by the stomach of animals.
(b) A kind of chewing gum.
(c) Difficult and painful digestion.
(d) Defective eyesight.

Ear
(a) Insectivorous.
(b) The fruit-bearing part of a cereal plant.
(c) The hard, fleshy part of the jaws which invests the teeth.
(d) Many-lobed, as the liver of a cat.

Earth
(a) To discover anything concealed.
(b) A discourse on the skin and its diseases.
(c) A plowing.
(d) A vessel made of clay.

Eccentric
(a) A species of terrestrial orchids found in the Rocky Mountains.
(b) An invalid.
(c) A person of peculiar habits.
(d) One who lives for himself alone.

Educated
(a) Instructed.
(b) Ignorant.
(c) Ridiculous.
(d) Descriptive.

Electricize
(a) To measure degree or intensity of heat by means of electricity.
(b) Positive, as distinguished from negative, electricity.
(c) To measure the quantity or intensity of electricity.
(d) To electrify.

Element
(a) A component, fundamental, or essential part.
(b) Worthy to be chosen.
(c) Humane.
(d) An evergreen tree bearing edible fruit.

Elk
(a) A garden tool.
(b) A climbing plant, a species of clematis.
(c) A very large deer of northern forests.
(d) To imitate.

Embrace
(a) Stupid.
(b) A species of narcissus.
(c) A clasping in the arms.
(d) A pale red color with a cast of orange.

Enclad
(a) A system of notation based on 12.
(b) Jangled.
(c) Clothed.
(d) The rough surface on the outside of sea-shells.

Engineered
(a) Drawn out by means of a rigid examination.
(b) Managed skillfully or superintended.
(c) A thin wooden covering to hide rough metal work.
(d) Excitement allayed by diverting the mind.

Enough
(a) A fine powder used for snuffing.
(b) A coarse purple moss growing on sandy soil.
(c) Sufficiency.
(d) A constant desire.

Entity
(a) The end.
(b) Mere being.
(c) Something that does not recur.
(d) A strong appetite.

Equational
(a) At or near the equator.
(b) A jelly-like consistency.
(c) Easily broken or mashed.
(d) Implying the use of equations.

Err
(a) One who has general charge of the king's servants.
(b) The end of the lifting plane of a flying machine.
(c) The sound of a mosquito in flight.
(d) To be incorrect.

Estately
(a) Any food with a high flavor.
(b) Having a grand and impressive appearance.
(c) A park arranged in geometric figures.
(d) A case in which a compass is kept.

Ethize
(a) To throw liquids into a fine spray.
(b) Food made by mixing the flesh of different fish.
(c) To throw away worthless goods.
(d) To establish morals or customs among.

Every-day
(a) Uncommon.
(b) Exciting.
(c) A cheap cloth of close texture.
(d) Common.

Executioner
(a) One who executes.
(b) A versatile actor.
(c) A gallows.
(d) A Persian measure for liquids.

Expiatory
(a) A house in which bee-hives are kept.
(b) To rid of poison.
(c) A writing giving away a father's rights.
(d) Having the character of an atonement.

Extrinsic
(a) An acrid, puckering quality.
(b) Not inherent or included in a thing.
(c) A drug used externally only.
(d) A word in which the sound of s is prominent.

Fabler
(a) A kitchen utensil used for stirring.
(b) An inventor or teller of fables.
(c) A farmer who has no scientific training.
(d) Wood that splits easily.

Fag
(a) An old broken down horse.
(b) The back log in a fire place.
(c) The odor of musk.
(d) A blemish in a piece of woven goods.

Fall
(a) To descend by the force of gravity.
(b) The outside wooden rim of a wheel.
(c) To bind cloth by turning the edge and sewing.
(d) A steel trap that is fastened to a tree.

Fanciless
(a) A jelly without flavor.
(b) Uniform.
(c) The inability to defend in fencing.
(d) Unimaginative.

Feathering
(a) Having a capacity for absorbing oil.
(b) Trimming bushes to form a hedge.
(c) Water breaking into a fine spray.
(d) Plumage.

Fellow-servant
(a) A whirring sound.
(b) A jolly, good comrade.
(c) One who attends an athlete.
(d) A person who is engaged with others in a common pursuit under the same master.

Ferment
(a) A substance capable of producing fermentation.
(b) An aromatic oil used in candy-making.
(c) To stir up strife.
(d) Determined, set in his opinion.

Fetch
(a) A swamp grass used as hay.
(b) Go after and bring.
(c) A clamp with which to hold wire.
(d) A metal curtain to prevent smoke from a fire-place.

Fictitious
(a) Covered with smooth knobs.
(b) Having no real existence.
(c) One who makes his money by writing novels.
(d) Possible of being verified.

Figurative
(a) Solved by means of mathematical calculation.
(b) Covered with designs.
(c) Used in a sense not literal.
(d) Complicated.

Filose
(a) A dear little boy.
(b) A breakfast food prepared from barley.
(c) Thread-like.
(d) A small reddish blood-sucking insect found on rabbits.

Finn
(a) Larva of a tapeworm.
(b) A Welsh brandy.
(c) The end or termination.
(d) The back or dull side of a knife blade.

Firedrake
(a) An ignis fatuus.
(b) The male flamingo.
(c) The bright red-yellow streaks of the sun shining through clouds.
(d) A bright orange flower of the liverwort family.

Fish
(a) A grapple hook used in raising sunken vessels.
(b) A vertebrate animal with gills retained through life, breathing and passing its life in the water.
(c) The broad end of a weather-vane.
(d) An iron piece dropped into oil or gas wells to discharge an explosive.

Flag
(a) Any one of various herbaceous plants mostly with sword-shaped leaves and growing in water or moist places.
(b) To wear out or fatigue.
(c) A fluttering of the heart-beat.
(d) A broad flourish in artistic writing.

Flat
(a) Level.
(b) Having lost its edges.
(c) Dull.
(d) Bonds sold below par.

Fleshen
(a) To loosen flesh from bones.
(b) Put on flesh.
(c) To wet a dry powder slowly.
(d) To cause wood to swell by wetting.

Floatingly
(a) Not serious.
(b) Desiring ease.
(c) A lover of pleasure.
(d) In a bouyant manner.

Flowerage
(a) The quantity of water that passes a given point.
(b) A wagon carrying floral offerings at a funeral.
(c) The act of flowering.
(d) Redness of the face caused by fever.

Flush
(a) One who writes an original work.
(b) A hand full of money.
(c) To deluge with water.
(d) A financial success.

Focusing
(a) To sharpen a piece of metal.
(b) Depending on other people.
(c) Bringing to a point.
(d) Imitating the manners of other tribes.

Foraminifera
(a) Small openings in bones.
(b) Plants that spring up in burnt-over places.
(c) The open places in cracked lips.
(d) A large division of protozoans.

Forefeel
(a) The breast of a horse.
(b) To investigate.
(c) To substitute an attitude for for one's real feelings.
(d) To have a premonition of.

Form
(a) The earth that has been removed from the hole of the earthworm.
(b) To come from.
(c) Brave and true.
(d) To devise.

Fortify
(a) A term of shame.
(b) To provide with defensive works.
(c) To deride.
(d) To prepare entertainment for more than forty.

Friday
(a) A servant.
(b) To be lonely and discontented.
(c) The sixth day of the week.
(d) A state in which one is indifferent to all appeals.

Frondivorous
(a) Rough feeling on the tongue.
(b) Constantly appealing to one's self.
(c) Feeding on foliage.
(d) Something that is easily dyed.

Functional
(a) Things that are of no consequence.
(b) Coming from or being like fungus.
(c) Belonging to the proper office or work of an agent.
(d) Acting quickly.

Garnet
(a) A double necklace.
(b) A purchase by which the lower corner of a square mainsail or foresail is hauled to the yard.
(c) A vegetable used for greens and salads.
(d) Meaning not at all.

Gastronomic
(a) The ability to eat a great deal.
(b) Inflated like a balloon.
(c) A hard easily glazed tile.
(d) Pertaining to the art of preparing and serving appetizing food.

Gear
(a) Dress
(b) An ornament worn back of the ear.
(c) A cold north-east wind.
(d) Capacity for work.

General
(a) An officer who commands an army.
(b) A slow steady rain.
(c) An old important looking gentleman.
(d) A gentleman.

Genty
(a) Small and easily upset.
(b) Of elegant form.
(c) A boy who pretends he is a man.
(d) A small hen.

George
(a) The neck part of a coat or vest.
(b) A dining servant.
(c) One who desires wealth.
(d) A surprise.

Ginger
(a) A local name for a Mexican of the laboring class.
(b) A side rein of a bridle.
(c) The pungent, spicy rootstock of a certain tropical plant.
(d) A small insect, the bite of which causes much irritation.

Glycerin
(a) A smooth glassy surface.
(b) A sound like the rattling of buttons.
(c) A thick, oily liquid compound with a sweetish taste.
(d) A substance that cannot be emulsified.

Goatee
(a) A small goat.
(b) A boat fitted with one triangular sail.
(c) A half sneeze, half cough.
(d) A beard so trimmed that it falls from the chin like the beard of a goat.

Goggle
(a) The noise made by a male turkey.
(b) The rattling of a spoiled egg.
(c) A disease of sheep causing dizziness and staggering.
(d) A loose joint.

Goldenback
(a) A bill printed in yellow.
(b) The American golden plover.
(c) An overbearing rich person.
(d) Another name for goldfish.

Good
(a) The kernel of a nut.
(b) A fine fitting joint.
(c) That which yields any form of satisfaction.
(d) To pester.

Goshawk
(a) A short-winged hawk of the genus Accipiter.
(b) A soft chalky clay used in manufacturing.
(c) Noise made in forced expectoration.
(d) A scare-crow.

Graine
(a) Severe nervous pain.
(b) The eggs of the silkworm.
(c) Coarse grit of stone.
(d) To crush or reduce to granular form.

Granule
(a) A measure of drugs, 1-6 of a grain.
(b) A machine for fine grinding.
(c) A small grain, particle, or pill.
(d) A disease of the eyelids.

Grass
(a) In common usage, the green plants on which cattle and other beasts feed.
(b) An ignorant person.
(c) A flirt.
(d) An apprenticed butcher.

Grayback
(a) French soldier with grey uniform.
(b) Mountains on which the snow lies continually.
(c) Confederate money.
(d) One of various animals, such as the body-louse and the scaup-duck.

Greenable
(a) Easily ground to powder.
(b) That will take green color.
(c) A large room for drawing ships.
(d) A hand bomb used in close fighting.

Grog
(a) The craw or throat of an animal.
(b) A plaster of brown paper and vinegar.
(c) To make an unsweetened mixture of spirits and water.
(d) A coarse food.

Gross
(a) A fat goose.
(b) Glaring.
(c) Unsalable goods.
(d) Liberality.

Grudge
(a) A drink made of whisky and brandy mixed.
(b) A rough bearing.
(c) A tool used in scraping castings.
(d) To give or allow in a reluctant spirit.

Gulfed
(a) Filled with fissures.
(b) Completely overwhelmed.
(c) Completely drained.
(d) Drunk.

Gun-reach
(a) The axle under a field cannon.
(b) The range of a gun.
(c) A tool for cleaning gun barrels.
(d) A carrying strap attached to a coarse bag.

Gymnospermae
(a) A former important class of exogenous plants.
(b) Gymnasium practice.
(c) Oil gotten from sharks.
(d) A mushroom.

Hammer
(a) One who constantly objects.
(b) A wood destroying bird.
(c) A hand-implement having a head at right angles to the handle.
(d) A photographic dry plate.

Handless
(a) A power lift.
(b) Without hands.
(c) An expert dispatcher.
(d) An automatic machine.

Hand-nut
(a) A delicious large thin shelled nut.
(b) A nut that can be cracked in the hands.
(c) A nut having protuberances enabling it to be turned without a wrench.
(d) A wart.

Harbored
(a) To flee in disorder.
(b) To be absolved from sin.
(c) Given shelter.
(d) To find rest.

Harmonical
(a) Possessing harmony.
(b) The French harp.
(c) A pair of eye-glasses with heavy frames.
(d) A metal of uniform density

Harvester
(a) The sand in which pig-iron is run.
(b) An autumn song.
(c) Death.
(d) One who gathers a crop or crops.

Hazer
(a) A stone to sharpen cutlery.
(b) One who subjects another to sportive mal-treatment.
(c) Very productive soil.
(d) A saddle strap.

Heart
(a) To urge to action.
(b) The central organ of the vascular system of animals.
(c) The female deer.
(d) To listen cautiously.

Helmeted
(a) Furnished with a defensive armor for the head.
(b) One who has had a good helpmeet.
(c) Thwarted.
(d) One who does not reveal himself.

Hemic
(a) Belonging to the Hemetic race.
(b) A dry hacking cough.
(c) Pertaining to the blood.
(d) A pale countenance.

Hemispheric
(a) In a whirl.
(b) Rapidly rotating.
(c) Air at half pressure.
(d) Of, pertaining to, or having the form of a half-sphere.

Heretical
(a) Things inherited.
(b) Opinions held by a small group.
(c) The right view.
(d) At variance with accepted views or beliefs.

Hierarchy
(a) Opposition to the existing government.
(b) Governmental persecution.
(c) A body of ecclesiastical rulers.
(d) Narrow philosophic views.

Holler
(a) A soup bowl.
(b) Hungry feeling.
(c) Halloo.
(d) A holier than thou attitude.

Honorable
(a) Despised politician.
(b) A worthless person.
(c) Able to praise.
(d) Estimable.

Horse-tamer
(a) A tall coarse weed repulsive to horses.
(b) One who reduces fractious horses to submission.
(c) A sharp spur.
(d) A pungent mixture of pepper and ginger.

House
(a) A large frame for holding machine parts.
(b) A resort of bad reputation.
(c) A place of abode or shelter.
(d) Applied to an old person who is afraid of exposure to weather conditions.

Humiliant
(a) A fertilizer that increases organic matter in soil.
(b) An alkali that forms soap.
(c) The slow vibrating resonant parts of a musical instrument.
(d) Making humble.

Hymnology
(a) The worship of Hymen.
(b) Marriage songs.
(c) Science of eugenics.
(d) The study or science of hymns.

Hypnotize
(a) To cause a sudden expansion of liquids.
(b) To treat with a magnet.
(c) To cause fainting.
(d) To produce artificial trance-sleep.

Ice
(a) Frozen water.
(b) Hardening of bones.
(c) Unfriendliness.
(d) Bad manners.

Icy
(a) Brisk.
(b) Snubbed.
(c) Frozen.
(d) Brittle.

Idolater
(a) An adorer of images or symbols.
(b) A bluffer.
(c) One who indulges in personal vice.
(d) An oscillating screen.

Imaginational
(a) Utopian.
(b) Pertaining to the creative or constructive power of the mind.
(c) A place of constant pleasure.
(d) Pleasure seeking.

Impaction
(a) To infringe on another's rights.
(b) To inclose in capsules.
(c) A wedging of one part into another.
(d) Safety wedges on gun actions.

Improperation
(a) Reproach.
(b) Excess.
(c) Without reasonable limits.
(d) To destroy the value of property.

Inaugural
(a) Center of an augur.
(b) Without promise.
(c) Circumstances that indicate defeat.
(d) Pertaining to the ceremony of investing persons with public office.

Includible
(a) One whom punishment does not seem to affect.
(b) That may be embraced as a component part.
(c) That which is shut out.
(d) Speech that cannot be corrected.

Incrustata
(a) A section of cyclostomatous polyzoans.
(b) Covered with rust.
(c) A crusty sweet-meat.
(d) An irritable old man with fixed ideas.

Individualize
(a) To give offense.
(b) To distinguish.
(c) To boast.
(d) To declare a personal liking.

Inebriate
(a) Drunken.
(b) Full of vitality.
(c) Broken down.
(d) To brew.

Infima.
(a) The lowest.
(b) An outcast.
(c) An attractive little lady.
(d) A smaller peak on a large mountain.

Inform
(a) Shapely.
(b) Handsome.
(c) Soiled.
(d) Shapeless.

Infuriate
(a) Boiling caused by acid.
(b) Enrage.
(c) To feed flames.
(d) To furrow.

Initiator
(a) A machine that feeds an automatic glass machine.
(b) One who instructs in rudiments or secrets.
(c) One having taken the vows of the Catholic church.
(d) One who has very high ethical opinions.

Inoccupation
(a) Want of occupation.
(b) Becoming the victim of a germ disease.
(c) A dangerous occupation.
(d) Period of germination for seed.

Inset
(a) A hard leather brace in a shoe.
(b) One who has fixed ideas.
(c) Insert.
(d) A hard band of leather covering a softer one.

Instrumental
(a) Serving as a means.
(b) Universal information.
(c) A mental problem.
(d) The phonograph.

Interested
(a) Invested money.
(b) With sparking eyes.
(c) Having the attention engaged.
(d) A mental aberration.

Intimidation
(a) Having detailed information.
(b) Act of making afraid or state of being afraid.
(c) Overflowing with water.
(d) Blending tones.

Invariant
(a) Constant.
(b) Can not be stretched.
(c) Repeater.
(d) A planet with a round orbit.

Iron
(a) A splendid salesman.
(b) A Jewish merchant.
(c) Imitation gold.
(d) The most important of the metallic elements.

Irritable
(a) Showing ill temper on little provocation.
(b) Rough surface.
(c) A place where one can get lost easily.
(d) Tillable land.

Isochronize
(a) To cause vibration, or the like in equal periods of time.
(b) A two footed bat-winged prehistoric animal.
(c) To study closely with a microscope.
(d) To measure by millimeters.

Jade
(a) A light feather.
(b) To tease and scold.
(c) A low, worthless person.
(d) An old blackbird.

Jesuitic
(a) Like the monks.
(b) Crafty.
(c) Humorous.
(d) Coming from Jerusalem.

Jigger
(a) To jerk up and down quickly.
(b) A flea, the chigoe.
(c) To embarrass.
(d) A light frame in carpentry.

Jointage
(a) Sraps of wood.
(b) Diversified freight put together to make a car-load.
(c) Connection or joining.
(d) Cabinet making.

Jujube
(a) A grimacing idiot.
(b) Any one of several Old World spiny shrubs of the buckthorn family.
(c) Brick-making clay.
(d) The jeering of a mob.

Key
(a) A Syrian lady of distinction.
(b) Serious objection.
(c) A detachable instrument for operating a lock.
(d) To cringe.

Kick
(a) A fragment of a brick.
(b) A blow with the foot or feet.
(c) To speak lovingly.
(d) Without sense of justice.

King-bird
(a) A roller for land, formed of two cones with their bases together.
(b) The male of the grossbeak.
(c) An American tyrant-flycatcher.
(d) A bird of the crow family.

Knight
(a) Time from sunset to sunrise.
(b) To confer the honor of knighthood upon.
(c) A Russian whip.
(d) A nautical mile.

Knowingly
(a) Without knowledge.
(b) In a fawning manner.
(c) Characterized by procrastination.
(d) Understandingly.

Lamented
(a) Regretted.
(b) Anything that is rejoiced over.
(c) A thing passed over but added as a supplement.
(d) Failure to receive a passing grade.

Lamp
(a) An oration delivered in Parliament.
(b) Entertaining a possibility.
(c) A Dutch measure of liquids.
(d) A thin plate.

Land-tortoise
(a) A species of clematis bearing variegated pods of peculiar shape.
(b) A tortoise that lives on land.
(c) A small one-horse cultivator.
(d) A machine for refining gold.

Lanterned
(a) Two things of a kind.
(b) Furnished with light.
(c) Having inherent wickedness.
(d) Striated, or marked with small parellel channels.

Large
(a) A univalent hydrocarbon radical.
(b) A rite or ceremony pertaining to burial.
(c) A note of the value of two or three longs, according to rhythm.
(d) Anything not well understood.

Latered
(a) Medieval angelology.
(b) Opposed to sessil-eyed.
(c) Inclined to procrastinate.
(d) Oblong, with one end narrower than the other.

Law
(a) An obligatory rule of action.
(b) A species of palm tree.
(c) A villain.
(d) A garb of mourning.

Lay
(a) Pertaining to employment.
(b) A lyric poem.
(c) To be situated.
(d) A machine for turning articles of wood, metal, etc.

Leafage
(a) Muck.
(b) The blossoming period of a plant.
(c) Permission.
(d) Foliage.

Leaven
(a) Fermenting dough, used to lighten or raise other dough.
(b) To liquidate.
(c) To haggle.
(d) A plant with large, white, solitary flowers.

Leech
(a) A tree characterized by smooth gray bark and dark green foliage.
(b) A discophorous annelid, having suckers.
(c) A kind of apple growing in southern France.
(d) A dry measure in use in Madagascar.

Leonine
(a) Pertaining to the fundamentals of the Kantian philosophy.
(b) Capable of being thought.
(c) A verse in which the syllable ending the verse has rime or assonance with the syllable just before the cesural pause.
(d) In ancient times, any multiple of nine.

Lessoned
(a) Diminished.
(b) Having been granted a lease.
(c) Given instruction.
(d) Thatched with bulrushes.

Levee
(a) Not shut.
(b) In a state of lethargy.
(c) A clear, bluish variety of thorite.
(d) A levy.

Lie
(a) An elaborate discourse delivered in public.
(b) To utter falsehood.
(c) To place.
(d) To produce eggs.

Light
(a) A small plant which lives as a commensal in the gill cavity of an oyster.
(b) Illumination.
(c) Adored.
(d) To perceive.

Lilyfy
(a) To practice occision.
(b) To make like a lily.
(c) A species of octopus.
(d) To pay a debt of honor.

Linesman
(a) A supplication.
(b) One who causes.
(c) A workman for stringing telegraph wires, etc.
(d) In a laundry, one who hangs clothes to dry.

Link
(a) The egg-plant.
(b) A worshiper's faldstool.
(c) A flat or undulating stretch of sandy soil, more or less covered with grass.
(d) Act of leaving undone.

Liquorice
(a) A general name for all plants from which narcotic drugs are produced.
(b) A cloak.
(c) A perennial herb of the bean family used in confectionery.
(d) An ecclesiastical service of medieval times.

Loche
(a) A small fresh-water bottom-feeding fish of the Old World.
(b) A corpse.
(c) To issue commands.
(d) A fastening for doors, etc.

Loded
(a) Magnetized by lodestone.
(b) Charged with ammunition.
(c) Hindered.
(d) Having made probationary.

Looked
(a) Things which cause unfavorable comment.
(b) Having directed the gaze toward an object.
(c) Any organization.
(d) Having pursued diligently.

Lose
(a) News.
(b) In front.
(c) Entertaining a possibility.
(d) A disease of the mouth.

Lovelily
(a) In a lovely or loveable manner.
(b) A lily having a large, solitary, cream-colored flower.
(c) The fruit of a kind of cactus.
(d) The otocyst of a mollusk.

Lunge
(a) A crypt in a Javanese sanctuary.
(b) A rope used in training horses.
(c) Violent misdoing.
(d) To pamper the appetite.

Madder
(a) A species of small snake.
(b) A whiskey keg.
(c) A Mohammedan place of worship.
(d) A square-shaped wooden drinking cup.

Magnesia
(a) A compound of manganese and chlorine.
(b) Sweet.
(c) Characterized by gentleness.
(d) A light, white, earthly powder consisting of magnesium oxid.

Make
(a) Hesitation.
(b) A comrade.
(c) To produce.
(d) Anything evil.

Mammilla
(a) Advancement of an army.
(b) An officer of high rank in the Austrian army.
(c) A yellow, hairy caterpillar.
(d) A nipple or teat.

Mannikin
(a) A plant with brilliant flowers.
(b) A bird of the genus Alcedo, which preys on fish.
(c) An S-link.
(d) A little man.

Marketable
(a) A device used in cross-marking for the planting of corn.
(b) Suitable for sale.
(c) The herb Paris.
(d) A court of equity.

Masquerade
(a) A game in which balls are propelled by mallets.
(b) A cross on a staff carried by a bishop.
(c) Fancy knitting.
(d) A social party composed of persons masked and costumed.

Mat-rush
(a) The final hold in a wrestling contest.
(b) The beginning of a boxing contest.
(c) A small meadow-lark.
(d) The cosmopolitan great, or lake, bulrush.

Mavis
(a) The European song-thrush.
(b) A tropical fruit similar to the banana.
(c) Bearing hatred toward another.
(d) A Chinese tailor.

May
(a) A kind of bean.
(b) To domineer over.
(c) A celebrated meteorite found in Siberia.
(d) A maid.

Measure
(a) Pertaining to the canning of oysters.
(b) One who is very mischievous.
(c) To bear forth or abroad.
(d) Any standard of criticism, comparison, judgment, or award.

Memorative
(a) Pertaining to the memory.
(b) Receiving an impression.
(c) A safety appliance for gasoline engines.
(d) Being too highly estimated.

Mesozoa
(a) A torch used in Italy at night burials.
(b) A variety of granite.
(c) A certain primary division of the animal kingdom.
(d) The sharp point of a battle-ax.

Metrical
(a) Pertaining to liquid-measure.
(b) Of the nature of verse.
(c) A multiple of eight.
(d) Pertaining to the spot at which light penetrating a convex lens is focused.

Micrology
(a) A scientific study of microscopes.
(b) The science of bacteria.
(c) The branch of science that treats of microscopic objects.
(d) The science of antiquities.

Midwinter
(a) A snowbird.
(b) A submarine.
(c) Cold.
(d) The middle of winter.

Mill
(a) A thousandth part.
(b) A species of flat, unpalatable fish.
(c) An insect similar to the gnat.
(d) To mend clothing.

Mind
(a) Nasal catarrh.
(b) A diadem.
(c) A beveled gear-cog.
(d) A spur-rowel.

Minotaur
(a) A giant.
(b) A unicorn.
(c) A species of octopus.
(d) A monster with the head of a bull and body of a man, or vice versa.

Missy
(a) A magnetic separator used in the concentration of zinc ore.
(b) Affected, or prim.
(c) Religious to excess.
(d) A deep trench filled with water.

Mitral
(a) Resembling the head-dress worn by the Pope, archbishops, and bishops.
(b) Pertaining to measurements.
(c) Having little influence.
(d) Covered with a hard crust.

Modiste
(a) A beliver in the doctrine that the body of Christ on his ascension merged into the deity.
(b) A dressmaker.
(c) Saturated.
(d) A steam roller.

Monodactyl
(a) A place of worship.
(b) A kind of optical instrument.
(c) Having only one toe or finger.
(d) A hypothetical radical formed by substituting atoms of a metal for those of hydrogen in ammonium.

Mons
(a) The eminence at the lower part of the abdomen.
(b) The sternum.
(c) An instrument for distinguishing sounds within the cavities of the body.
(d) An overestimation.

Moor-coot
(a) A rare variety of water-lily.
(b) The water-hen.
(c) A road built through swampy ground.
(d) A small animal closely related to the musk-rat.

Mortifiedness
(a) A chemical reaction.
(b) Subjugation of the passions.
(c) Belonging to one's self, or itself.
(d) Condition of being formed by subjugation to great heat and pressure.

Motioned
(a) Opposed.
(b) Sheltered.
(c) Directed by a sign or gesture.
(d) Fruitful.

Mountain
(a) A permutation lock.
(b) Alliteration.
(c) A proletariat.
(d) A lofty elevation of earth and rock.

Mowing
(a) The process of putting hay, etc., into a mow.
(b) Propelling.
(c) Nonplussing.
(d) A wing formed of membrane, as found among bats, etc.

Mummy
(a) The science of the forms assumed by plants and animals.
(b) A small eruption of the skin, as a pimple.
(c) A child's word for mother.
(d) Spotted.

Muscle
(a) A mytiloid bivalve mollusk.
(b) The assembling of troops.
(c) One who makes trousers.
(d) A bungling performance.

Muskrat
(a) One who lives his entire life at the place of his birth.
(b) An aquatic rat-like rodent.
(c) A mouth organ.
(d) A large water-fowl having an enormous bill.

Mutter
(a) Grumble.
(b) A strong perfume obtained from the male musk-deer.
(c) State of having more than one husband.
(d) More foolish.

Necessary
(a) A deceased person.
(b) That which is indispensable.
(c) A kind of fruit.
(d) The tithe belonging to a person.

Neglect
(a) The cavity between the lips and the pharynx.
(b) To fail to treat with proper care.
(c) Salsify, or oyster plant.
(d) A hinge.

Nervule
(a) A kind of cheese manufactured in Switzerland.
(b) A figure constructed of ovalbumin.
(c) A small nerve.
(d) To overpersuade.

Nightcap
(a) A head-covering for sleeping in.
(b) A mad prank.
(c) Shelter for sheep or goats.
(d) A permutation.

Nobodyness
(a) Priestism.
(b) An obsequy.
(c) The state of being anonymous.
(d) State of having lost one's property.

Northeast
(a) A topmast.
(b) To cry aloud.
(c) The point of the horizon lying midway between north and east.
(d) To domineer over a weaker person.

Nothingly
(a) That which a person does for, or with reference to, another or others.
(b) A Hindu place of worship.
(c) A tedious piece of work.
(d) Without value or result.

Nursedom
(a) An outrage.
(b) Convalescence.
(c) An organized body of nurses.
(d) The period of confinement at childbirth.

Oak-tanned
(a) Exceeded in number of votes.
(b) Made brown.
(c) Tanned with an extract of oak-bark.
(d) Strengthened by an addition of oak timbers.

Obigancy
(a) An oration.
(b) The state of being bound in law or conscience.
(c) An organization for the protection of dumb animals.
(d) The reign of a sultan.

Octapody
(a) Cleft into eight parts.
(b) An eight-footed verse or period.
(c) A species of octopus.
(d) Incomprehensibility.

On
(a) In contact with the upper side or surface of.
(b) Act of receiving a wonderful impression.
(c) Without exception.
(d) To issue commands.

Oratorical
(a) Pertaining to public speaking.
(b) A kind of gaitor used by soldiers.
(c) Having to do with newspapers.
(d) A tropical evergreen.

Order
(a) Anything held in contempt.
(b) A society of persons organized for mutual protection, aid, etc.
(c) An instrument for showing the wave form of alternating currents
(d) Confusion.

Ornamental
(a) Any vital or systematically arranged organic whole.
(b) An operative.
(c) Serving to adorn.
(d) A sport.

Ostentatious
(a) Pretentious.
(b) Confidential.
(c) Foolish.
(d) Influential.

Outscout
(a) The common dew-berry.
(b) A sum of money sent through the mails.
(c) To spy successfully.
(d) An advance scout.

Overflow
(a) Most prosobranchiate gastropods.
(b) A flood.
(c) Excessive secretion of organic acids.
(d) An omittance.

Oviducal
(a) Pertaining to an oviduct.
(b) Having to do with an over-lord.
(c) Egotistically.
(d) Having the form of an egg.

Packery
(a) An establishment where goods are packed.
(b) A hog-like wild quadruped of America.
(c) The act of canning fruits and vegetables.
(d) A rope connected to the rudder of a boat.

Pageant
(a) A dramatic representation.
(b) Overalls.
(c) A discovery.
(d) A holiday costume.

Painstaking
(a) Calmness.
(b) Ability to endure excessive pain
(c) Claiming by right of discovery.
(d) Close and accurate attention.

Paper-faced
(a) Very ruddy.
(b) Cowardly.
(c) Coated or faced with paper.
(d) Pretending to do one thing and doing the other.

Paraphernalia
(a) Sluggishness.
(b) A supporting column.
(c) In astronomy, the plotting of curves to represent the movements of planets.
(d) Belongings.

Partial
(a) To share.
(b) In acoustics, a harmonic.
(c) A division or wall between apartments.
(d) Having lost the power of action

Pass
(a) Soft food for infants.
(b) To go by, over, through, or the like.
(c) One of the minute elevations in the skin in which nerves terminate.
(d) Sudden emotion.

Pastoral
(a) A fable or allegory illustrating the truth.
(b) A poem, play or book dealing with rural customs.
(c) A small wooden vessel used as a dipper.
(d) Turned in.

Pea-comb
(a) A fowl's comb in three parallel parts.
(b) One-half of a pea-pod.
(c) A machine for grading peas.
(d) To comb thoroughly.

Pectoral
(a) A miner's tool.
(b) An ornament worn on the breast.
(c) Attractive.
(d) An old-fashioned reaper.

Peeped
(a) By the day.
(b) A small pointed piece of wood.
(c) Looked slyly.
(d) Nettled.

Pelviform
(a) Having a knob.
(b) Irregular.
(c) Smooth.
(d) Shallowly cup-shaped.

Pennate
(a) Unobstructed.
(b) Having wings or feathers.
(c) Overcome with remorse.
(d) Easily influenced.

Perimeter
(a) The point at which the diagonals of a parellelogram intersect.
(b) A guage on a head-gate.
(c) To amble.
(d) The bounding line of any figure of two dimensions.

Perling
(a) Without regard to true value.
(b) One of a series of horizontal timbers laid across the principal rafters in building.
(c) Having the manner of a fatalist
(d) Braiding.

Persist
(a) In geometry, an even surface.
(b) To adhere firmly to any course.
(c) A kind of fodder.
(d) To make smooth.

Phi Beta Kappa
(a) An honorary fraternity based upon high scholorship.
(b) An honorary athletic fraternity.
(c) A Jewish fraternal organization founded in New York.
(d) An honorary scientific fraternity.

Pickle
(a) An attractive French maid.
(b) A small quantity.
(c) To spy into foreign matters of state.
(d) To give up in despair.

Pigeon-English
(a) A small long-tailed parrot.
(b) A cry made by pigeons when startled.
(c) A jargon of English intermixed with Chinese, Portuguese, etc.
(d) Profanity.

Pine
(a) Intolerance of light.
(b) A kind of bulrush found in Egypt.
(c) The laughing gull.
(d) The name of a game of chance.

Pipe
(a) Dismay.
(b) A domesticated dove.
(c) The leader of a flock of wild geese.
(d) An apparatus for smoking tobacco.

Piu
(a) Fortune telling.
(b) Little.
(c) In music, more.
(d) In music, less.

Plain
(a) A species of grass.
(b) An expanse of level land.
(c) A long spear used by the Vikings.
(d) To cause chemical action.

Plane
(a) An expanse of level land.
(b) To braid.
(c) Level.
(d) A pipe which supplies the boiler of a steam engine.

Planting-ground
(a) The act of sowing or planting grain.
(b) An expanse of level ground.
(c) An area where oyster-beds are laid.
(d) A cement foundation for huge cannon.

Platonist
(a) One who is beautiful.
(b) A buffoon.
(c) Any imitation.
(d) A follower of Plato.

Plot
(a) To commit crime.
(b) A cushion behind a saddle, designed for a lady rider.
(c) To represent graphically.
(d) To scan intently.

Plume
(a) Cards used for gambling purposes.
(b) A small piece of land.
(c) A feather, especially when large and ornamental.
(d) A plant similar to the cactus.

Pneumatical
(a) Pertaining to air or gas.
(b) Having to do with rubber.
(c) Concerning weight.
(d) Soft.

Poisoned
(a) Subjected to maltreatment.
(b) Having pin-feathers.
(c) Made ill or killed by poison.
(d) An inheritance.

Policeman
(a) Any person who receives bribe money.
(b) A city watchman.
(c) An egotistical, overbearing man
(d) A chasm.

Pollen
(a) A flat dish.
(b) An agreeable sensation or emotion.
(c) To supply or dust with pollen.
(d) Gentle.

Polyangular
(a) Many-angled.
(b) Irregular.
(c) Complicated.
(d) Shapely.

Pond-pine
(a) A variety of loblolly-pine.
(b) A kind of rush.
(c) A water-lily with bright green leaves.
(d) A tree stripped of branches.

Popper
(a) To trot.
(b) A quick thrust.
(c) To deprive of hair.
(d) To chuckle.

Port
(a) Full-fledged.
(b) To act contrarily.
(c) To bear.
(d) Empty.

Positional
(a) Loss of self-confidence.
(b) The highest point of a column.
(c) Pertaining to position.
(d) A basis.

Potent
(a) Bending or yielding to pressure.
(b) Not existing in possibility.
(c) A pivot-bearing in a watch.
(d) To elect to office.

Precent
(a) To give.
(b) To place in a particular manner.
(c) A commandment.
(d) To lead the singing of a choir or congregation.

Prefecture
(a) The office of a prefect.
(b) Superiority.
(c) State of being without blemish.
(d) A membrane lining the abdominal cavity.

Prepended
(a) Placed at right angles to a given line or surface.
(b) Harassed.
(c) Explained.
(d) Considered beforehand.

Presidencia
(a) In Cuba, used to designate the term of office of the governor.
(b) A bill proposed or initiated by the president.
(c) In the Philippine Islands, the building used as government headquarters.
(d) The ruler of the Republic of Panama.

Pretext
(a) Cruel.
(b) A fictitious reason or motive.
(c) To derive joy from a thing.
(d) An act without cause.

Primary
(a) Unimportant.
(b) That which is first in rank, dignity, or importance.
(c) Labor for pleasure rather than for wages.
(d) A written or printed paper posted in a public place.

Print
(a) To kiss.
(b) A picture frame.
(c) An impression with ink from type, plates, etc.
(d) To refer a law for amendment.

Privative
(a) Ungrateful.
(b) Causing want.
(c) Scheming malignantly.
(d) Belonging to the ranks.

Processal
(a) Relating to marching.
(b) Relating to proceedings at law.
(c) Having great expectation.
(d) Trunks of some animals, as the elephant.

Professorate
(a) To expound.
(b) To pull with sudden force.
(c) The position of a professor.
(d) To throw one's self headlong.

Projectable
(a) A drafting table.
(b) Capable of being foretold.
(c) Possible of projection.
(d) Part of a photometer.

Proliferation
(a) The act of producing rapidly.
(b) Denial.
(c) Act of inciting.
(d) A projection.

Proofy
(a) A crystal of quartz, pale rose in color.
(b) A species of grouse with feathered toes.
(c) Ragged.
(d) Expected to turn out well.

Prudish
(a) Silly.
(b) A shallow vessel made of pewter.
(c) Overnice.
(d) In a conciliatory manner.

Puffed
(a) Made to pant.
(b) A seafish of the cod family.
(c) Having a great deal of dandruff
(d) A small bird similar to the sparrow.

Puma
(a) A division of birds comprising those whose young are not hatched until able to care for themselves.
(b) Scrawny.
(c) A large American carnivorous animal.
(d) Enormous.

Pupilage
(a) The period during which an insect is enclosed in its case before full development.
(b) Six years of age.
(c) The act of giving instruction.
(d) The state or period of being a pupil.

Quarter
(a) A plunderer.
(b) A mass of molten metal.
(c) To fix a bayonet on a gun.
(d) To drive a carriage so as to avoid inequalities of ground.

Queened
(a) Twisted.
(b) Cut short.
(c) Made a queen of.
(d) Allowed to grow long.

Quietant
(a) Anything that prevents quiet.
(b) Anything that induces quiet.
(c) State of being quiet.
(d) A deed of release.

Race
(a) To remove dirt from stone.
(b) A brogue.
(c) Stuffed with feathers of poor quality.
(d) A competitive trial of speed.

Radial
(a) A radiating part.
(b) Any section of a spectrum which contains only one color.
(c) Fundamental.
(d) A single ray of sunlight.

Rail-snipe
(a) A small carpenter's plane.
(b) A painted snipe
(c) A lizzard.
(d) An adz.

Rate
(a) The measure of a thing.
(b) To praise highly.
(c) Cut down level with the ground
(d) A palm with smooth reed-like stem.

Ravished
(a) Coarse.
(b) Captivated or enraptured.
(c) Starved.
(d) Devoured greedily.

Reader
(a) One who reads.
(b) A class of fishes including the skate, etc.
(c) Scantily clad.
(d) More wisely.

Recall
(a) A light sword with a narrow blade.
(b) A calling back.
(c) Having the feathers only beginning to shoot.
(d) Shrink or fall back.

Reconcile
(a) To restore to friendship after estrangement.
(b) A condition favorable to photography.
(c) To pledge reformation.
(d) To kiss tenderly.

Red
(a) A color seen at the end of the spectrum opposite to the violet end.
(b) A long, deep hollow worn by a torrent.
(c) Objectionable.
(d) Perused.

Redskin
(a) A petrified plant.
(b) A small copper-tinged snake which is very poisonous.
(c) A North American Indian.
(d) An indolent person.

Reformer
(a) One who reconstructs, especially from bad to good.
(b) One of several boats supporting a bridge.
(c) Better.
(d) The principal of inflammability.

Relaxed
(a) Tightened.
(b) A textile fabric of wool and silk.
(c) Slackened.
(d) Suspended.

Remittance
(a) Without value.
(b) The act of transmitting money.
(c) A disappointment.
(d) Constant striving toward a fixed goal.

Repel
(a) To fall back.
(b) To give up without a struggle.
(c) To cease.
(d) To keep back.

Retentive
(a) Having the power to keep.
(b) Heedful.
(c) Having compassion.
(d) That which may be held.

Returnable
(a) A device for changing the position of heavy objects, such as locomotives, etc.
(b) Capable of being returned.
(c) In excellent condition.
(d) Acceptable.

Reviver
(a) A reformer.
(b) One who or that which reanimates.
(c) A channel for carrying off rain water.
(d) An angular piece of cloth inserted in a garment.

Rhetoricate
(a) To affect little, or not at all.
(b) To prepare an oration.
(c) To instruct in oratory.
(d) To make an oratorical display.

Ridge
(a) A peak.
(b) To cover with raised strips or lengthened elevations.
(c) To scold.
(d) A blacksmith's vise.

Rily
(a) A rope or chain used to guide or steady a suspended weight.
(b) Turbid.
(c) Frosty.
(d) A lacrosse racket.

Rippling
(a) A rapid or eddy of tide.
(b) System of ship's cordage which supports the masts and extends the sails.
(c) Personal satire.
(d) Extremely.

Roast
(a) A piece of meat roasted or prepared for roasting.
(b) To crown with a wreath of laurel.
(c) To persevere.
(d) In chess, the rook or castle.

Roman
(a) A wax candle.
(b) A style of type or letter.
(c) Deep orange in color.
(d) A scratch-harrow.

Roofer
(a) Harsher.
(b) One who makes or repairs roofs.
(c) One who cleans and cards wool.
(d) A humbug.

Rootage
(a) Pertaining to potatoes.
(b) Aggregate of a plant's roots.
(c) The age at which a hog begins to root.
(d) The three days preceding the festival of Ascension.

Rough
(a) A ruffian
(b) A range of small mountains.
(c) A bird similar to the partridge.
(d) A sulky rake.

Rueful
(a) A hallucination.
(b) Putrid.
(c) Sleepy.
(d) Sorrowful.

Run
(a) To use insolent language.
(b) A battle.
(c) Disordered intellect.
(d) To move at a pace swifter than a walk.

Sahib
(a) Master or gentleman.
(b) A male goat.
(c) An erruptive disease of the skin.
(d) An oriental servant.

Salable
(a) A price label.
(b) Marketable.
(c) A Hawaiian delicacy.
(d) Soft and silky.

Sand-blast
(a) An instrument for propelling a jet of sand with great force.
(b) A desert storm.
(c) A wind with a velocity of eighty or more miles per hour.
(d) A kind of giant powder.

Sauce
(a) Tincture of opium.
(b) Ears, feet, etc., of swine, pickled.
(c) Soft crayon for use with the stump.
(d) In ancient music, a small interval equal to the half of a comma.

Scalp
(a) A small shovel-like instrument.
(b) To prevaricate.
(c) To administer medicine to a horse.
(d) The skin, or skin and hair, of the top of the skull.

Scatteration
(a) State or condition of being without good sense.
(b) A small, inadequate ration.
(c) An ore containing zinc, lead, and iron.
(d) The act of scattering.

Scratch
(a) To play childish games.
(b) Indiscriminate.
(c) Perseverance.
(d) Proclivity.

Scythe-hook
(a) A reaping-hook having a smooth blade.
(b) A hook on which a scythe is hung when not in use.
(c) An appliance by means of which the blade of a scythe is fastened to the handle.
(d) Any crescent-shaped hook.

Secondary
(a) A colleague.
(b) Pertaining to youth.
(c) One who acts in a subordinate capacity.
(d) Of no value.

Seditious
(a) Active.
(b) Factious or turbulent.
(c) Without regard for others.
(d) Wicked.

Seizing
(a) A grading screen.
(b) A state approaching serfdom or slavery.
(c) The act of grasping suddenly or forcibly.
(d) A flirt.

Self-assumed
(a) Animated.
(b) Appropriated by one's own act, opinion, or authority.
(c) Egotistical.
(d) Righteous in one's own estimation only.

Self-possession
(a) Evident without proof.
(b) Caring for one's self alone.
(c) Obstinate or contrary.
(d) The full command of one's faculties.

Semioval
(a) A peculiar, uneven valley found in the South Sea Islands.
(b) Fruit of a certain kind of palm tree.
(c) A water-snake of the Amazon.
(d) Having the form of half an oval.

Sensitive
(a) One who undergoes an operation.
(b) One who is impressible.
(c) State of being famished.
(d) A person who is hypnotized.

Serpent
(a) A horned toad.
(b) A strip of leather for sharpening razors.
(c) A goose-neck coupling.
(d) Snake-like.

Sessional
(a) A low, closed, four-wheeled carriage for two.
(b) A brief pause or stop.
(c) A truce.
(d) Pertaining to the sitting of a court or public body.

Shack
(a) The leg from the knee to the foot.
(b) A vagabond.
(c) A long bar of iron.
(d) A fish of the herring family.

Sham
(a) To shanghai.
(b) A false pretense.
(c) Partial collapse.
(d) To dishonor.

Sheep
(a) The whiff, a kind of fish.
(b) To load freight.
(c) A common domestic animal, of the genus Ovis.
(d) Movement of heavy bodies.

Sheet
(a) To protect from danger.
(b) A model or mold for making bricks.
(c) To shroud.
(d) To give or deposit in pledge.

Shipshape
(a) Neatly.
(b) A derisive term for shaped like a tub.
(c) Disorderly.
(d) The top of a ship's highest mast.

Shoot
(a) Acute indigestion.
(b) A young branch of a plant.
(c) A greeting.
(d) A triumphant exclamation.

Shoulder-blade
(a) An evening gown.
(b) A sharp pointed sword or dagger.
(c) In a troop of cavalry, the command to charge.
(d) The scapula, a bone of the body.

Shunt
(a) A turning aside.
(b) A copper wire.
(c) An electrometer.
(d) To ignore a friend unwittingly.

Side
(a) Slowly.
(b) Widely.
(c) Niggardly.
(d) Dreamily.

Silly
(a) Unnatural collection of water in the body.
(b) A lover of full-dress suits.
(c) An enemy who pretends to be a friend.
(d) A foolish person.

Simultaneity
(a) Profuse of sweating.
(b) The state of occurring or existing at the same time.
(c) Inability to pay a debt of honor
(d) Counterfeiting.

Singular
(a) A dog that never barks or howls
(b) To gamble with dice.
(c) Not capable of sustaining a large population.
(d) That which stands by itself.

Sitting
(a) A species of marine algae.
(b) Being in the position of a sitter.
(c) Placing in position.
(d) The negative of a photograph.

Sky-blue
(a) Extremely morose.
(b) Of the color of the sky.
(c) Fair weather.
(d) A life-line.

Sled
(a) To neglect work.
(b) To ride or use a vehicle made for sliding on snow.
(c) The books of the New Testament usually called protocanonical
(d) To fall accidently.

Slip
(a) One who is burdened with excessive adipose tissue.
(b) An ancient lamp.
(c) Curds and whey.
(d) A very short track.

Slur
(a) A louse.
(b) To distill.
(c) A slighting remark.
(d) To commit depredation.

Smoke-stack
(a) Buckwheat pancakes.
(b) A team of horses arranged in tandem order.
(c) An upright pipe through which smoke is discharged from a furnace.
(d) The stem of a smoking pipe.

Snarl
(a) A noose.
(b) To say in a surly or angry manner.
(c) A kind of fowl in Brazil.
(d) Of, or pertaining to, the ictus, or verse stress.

Social
(a) An informal social gathering.
(b) A light, one-seated vehicle.
(c) Easily yielding to pressure.
(d) Absurd talk.

Socket
(a) A term in golf, meaning, in iron-play, to strike the ball off the heel of the club.
(b) Having or designating a tail nearly or quite symmetrical.
(c) To saturate.
(d) A plant with pendulous flowers, a native of South America.

Sole
(a) The bottom of the foot
(b) Having the crystals of the constituent minerals equally developed
(c) To make homologous.
(d) Life, essence, or spirit.

Sound
(a) Any vibration.
(b) A long and relatively narrow body of water.
(c) Generous.
(d) A cavity.

Spaceful
(a) Destruction by frost.
(b) White with age.
(c) Carefree.
(d) Of indefinite or vast extent.

Specificity
(a) Happiness.
(b) Appropriateness.
(c) The state of being precise.
(d) The state of theorizing.

Speech
(a) A flea.
(b) Corruption.
(c) The faculty of expressing thought by spoken words.
(d) A bird of color, with long neck and legs.

Spice-tree
(a) A variety of apple tree.
(b) A palm tree found in Italy.
(c) An evergreen tree of the western coast of the United States.
(d) To perform plant-surgery.

Spiritally
(a) Divinely.
(b) In an animated manner.
(c) Winding like the thread of a screw.
(d) With the breath.

Split
(a) The verbena.
(b) Wordiness.
(c) A thin piece of wood, etc., for confining a broken or injured limb.
(d) Severed.

Sport
(a) A spoke-shave.
(b) To splinter.
(c) A word of refusal or denial.
(d) Diversion.

Sprinkle
(a) Printer's types, confusedly mixed.
(b) A falling in drops or particles.
(c) To strike with something thrown
(d) A ray of lamp-light.

Square
(a) Engrossed in thought.
(b) A figure having three equal sides.
(c) Having four equal sides and four right angles.
(d) Any polygon.

Stableman
(a) One who can perform balancing feats adroitly.
(b) In a quandry.
(c) A jockey.
(d) A man employed about a stable.

Stale
(a) Dilatory.
(b) Food made by stirring oatmeal, or other meal into boiling water.
(c) An arch over a gate.
(d) In chess, a stalemate.

Stare
(a) In a gossipy manner.
(b) To fix the eyes in a steady gaze
(c) Absolute.
(d) Empty.

Statics
(a) The science of bodies in motion.
(b) The science of energy.
(c) The science of fluids.
(d) The science of bodies at rest.

Stint
(a) To provide for or serve scantily
(b) Without regard to method.
(c) Awkwardly.
(d) A small arctic animal similar to the weasel.

Stopped
(a) Affected or produced by stopping or damping.
(b) Suiting or belonging to a teacher of children.
(c) Destitute of the strength of mind which constitutes courage, fortitude, etc.
(d) Profit.

Strain
(a) Poverty.
(b) Line of descent.
(c) To break.
(d) A Canadian lumberman's ax.

Streamful
(a) Profuse weeping.
(b) Flowing with a full stream.
(c) Undoubting assurance.
(d) In grammar, a word that affirms existence.

Striker
(a) An employee who leaves his work in an endeavor to force his employer to accede to some demand.
(b) A levy or tax.
(c) More striking in appearance.
(d) An assortment of types of one style.

Structureless
(a) Devoid of arrangement.
(b) Weak.
(c) Morally degraded.
(d) Without material.

Subprincipal
(a) Any person under the direction of a principal.
(b) A truth or doctrine not strictly fundamental.
(c) Unsettled.
(d) A vice-principal.

Sulk
(a) To be in a dilemma.
(b) To be artful.
(c) A coward.
(d) Be sullen.

Sundered
(a) Brought together.
(b) Inverted.
(c) Disunited.
(d) Directed.

Supreme
(a) Dough formed into strips, dried and used in soups.
(b) Culmination.
(c) One of a tribe that wanders about.
(d) That which may not be doubted.

Surmise
(a) A conjecture made on slight evidence.
(b) Particle marking the second part of a negative proposition.
(c) A cooking utensil.
(d) Indomitable.

Surveyance
(a) A small projection with an orifice.
(b) A thorough discussion.
(c) Inspection.
(d) Deduction.

Sweepage
(a) Dirt or debris of any sort.
(b) The vesture of land taken by mowing.
(c) A court knave.
(d) Range of vision.

Syllogistic
(a) Puzzling.
(b) Inductive, as opposed to deductive.
(c) Deductive, as opposed to inductive.
(d) Exasperating.

Table
(a) The summit of a mountain.
(b) A domestic fowl.
(c) An article of furniture having a flat horizontal top.
(d) To nurse the sick.

Taedium
(a) A soft composition of meal, bran, etc., applied to sores.
(b) Irksomeness.
(c) A stringed instrument.
(d) An unpleasant task.

Take-all
(a) An exclamation of disgust.
(b) A family conveyance.
(c) An unscrupulous beggar.
(d) Exhaustion of the soil.

Tally
(a) To direct.
(b) To attempt to dissuade.
(c) An account or reckoning.
(d) A group of figures.

Tamboura
(a) A wire-stringed musical instrument.
(b) A striking headdress.
(c) A metallic whistle.
(d) A field-mouse of Southern Africa.

Tap
(a) An inclosure where liquors are served.
(b) An arrangement for drawing out liquids.
(c) To condense.
(d) A small peg.

Tarpon
(a) A long,barbed spear.
(b) A combination of pulleys.
(c) To gather into folds.
(d) A silver fish of the West Indies and other sections.

Tauten
(a) To pucker.
(b) Haughty.
(c) Characterized by gentleness.
(d) Tighten.

Tearful
(a) Abounding with tears.
(b) Characterized by a weak, cowardly spirit.
(c) To weep without cause.
(d) Open-hearted.

Telegraphist
(a) A transmitter.
(b) One who believes in the doctrines advanced by Socrates.
(c) An entire telegraph system, taken collectively.
(d) A telegrapher.

Temper
(a) To lisp.
(b) A form of worship.
(c) More up-to-date.
(d) Heat of mind or passion.

Terse
(a) Short and pointed.
(b) Worn out by use, or very common.
(c) Beat severely.
(d) Angry.

Themselves
(a) In heraldry.
(b) Three of a kind.
(c) Plural of himself, herself, itself.
(d) The quality of having force.

Thermalgesia
(a) A craving for warmth.
(b) Unusual sensibility to heat.
(c) A thermometer for very high temperatures.
(d) Moisture of high temperature.

Thorax
(a) In Oxford, a beginning Latin course.
(b) The part of the body between the neck and the abdomen.
(c) A disease common among sheep
(d) A vulture.

Three
(a) Sovereignty.
(b) To perplex.
(c) A contrivance for retarding the motion of wheels, etc.
(d) The sum of two and one; a cardinal number.

Thumb-band
(a) A twist of anything as thick as the thumb.
(b) Handcuff or manacle.
(c) Fetters or shackles of any kind.
(d) A strip of cloth wound about the thumb.

Ticketing
(a) A small spike found in plants.
(b) The act of affixing or providing with tickets.
(c) A Chinese game similar to checkers.
(d) A small unpalatable lake-fish.

Time
(a) An enigmatical personage.
(b) Ceaseless.
(c) Ultimate death.
(d) A definite portion of duration.

Timothy
(a) The brake on a freight car.
(b) A valuable perennial fodder-grass or hay.
(c) A musical instrument similar to the accordion.
(d) A concordance.

Tiresmith
(a) A maker of tires for carriages.
(b) A sea-unicorn.
(c) Nascent.
(d) A thin, narrow bar of iron.

Tobacco
(a) Vile.
(b) The leaves of the tobacco-plant prepared in various ways for smoking, chewing, etc.
(c) Nauseous.
(d) Anything causing degeneration.

Tote
(a) A plane-handle.
(b) To protest.
(c) Expressive of disdain.
(d) An ornament in the gable of a house.

Townward
(a) Upward.
(b) In the direction of a town.
(c) A small migratory bird of Southern Europe.
(d) To a lower level.

Tradition
(a) A flowing in.
(b) Deliverance of a criminal to another government.
(c) Knowledge, opinions, etc., transmitted from generation to generation.
(d) Utter loss or ruin.

Transaudient
(a) An instrument for detecting very feeble sound vibrations.
(b) The condition arising when one sound wave comes into close proximity to another.
(c) Facilitating the transmission of sound.
(d) Causing refraction of sound.

Transitable
(a) Of short duration.
(b) Changeable.
(c) A support for a surveying instrument.
(d) That which may be crossed.

Transmutationist
(a) A transformist.
(b) One opposed to radical changes.
(c) One who condemns.
(d) One who passes through or over anything.

Treescape
(a) A small parasitic insect living in the bark of trees.
(b) A kind of woodpecker.
(c) A picture of woodland scenes.
(d) A variety of tall weeds.

Trifler
(a) One who idles or toys.
(b) A trefoil.
(c) Worth less.
(d) One who weaves baskets of willow twigs.

Trip
(a) A tortoise.
(b) A flock.
(c) A crow.
(d) A sock.

Trouble
(a) A state of distress, worry, etc.
(b) A three-leaved plant, as the clover.
(c) A dove-cot.
(d) Marriage.

Truss
(a) Female of the caribou.
(b) To coat or plaster.
(c) Short and thick.
(d) A series of concentric circles.

Tumble
(a) A small toad.
(b) A sudden fall.
(c) To obstruct.
(d) A grassy meadow.

Twitteration
(a) Gossip.
(b) The state of being in a flutter.
(c) The act of taunting.
(d) Discordant singing.

Unobserving
(a) Not giving attention.
(b) Barking or howling
(c) The spot at which French navigators first touch ground.
(d) Mutilating.

Undershot
(a) Wounded.
(b) A dum-dum bullet.
(c) Propelled by water that flows underneath.
(d) Grapeshot and canister.

Unicity
(a) The state of being divided.
(b) The condition of being inharmonious.
(c) The quality of being unique.
(d) Peevishness.

Unit
(a) A measure of force.
(b) To join together.
(c) A single person, thing, or group regarded as an individual.
(d) The egg of certain insects, as the louse.

Unitarian
(a) One of an order of Roman Catholic women, for the nursing of the sick and the teaching of young girls.
(b) One who favors union.
(c) A hermit.
(d) A member of any religious body that rejects the doctrine of the Trinity.

Unpurse
(a) To liquidate.
(b) To spend extravagantly.
(c) To rob of money.
(d) To open a purse.

Up-hill
(a) Densely settled.
(b) Up an ascent or against difficulties.
(c) Pertaining to horses.
(d) Causing tension.

Urgency
(a) An organ of the body.
(b) The condition of being pressing.
(c) That which is pleasing to the people.
(d) A precipitate.

Uterus
(a) Womb.
(b) In entirety.
(c) Of no intrinsic value.
(d) Having intrinsic value.

Vaginant
(a) Pertaining to maidenhood.
(b) Sheathing.
(c) Skillful.
(d) A female organ having to do with reproduction.

Value
(a) Antagonistic.
(b) True friendship.
(c) Worth.
(d) To inherit.

Variable
(a) That which is subject to change
(b) That which cannot change.
(c) Healthy.
(d) Unhealthy.

Vault
(a) Entrance.
(b) To boast or brag of.
(c) An ornamental hollow vessel.
(d) An arched apartment.

Velveted
(a) Relaxed.
(b) Having a surface like velvet.
(c) Beautiful.
(d) Experienced.

Venticular
(a) Being of the nature of a small vent.
(b) Pertaining to the heart.
(c) Pertaining to veins.
(d) Pertaining to arteries.

Vest
(a) A short sleeveless jacket.
(b) A prune.
(c) To speculate.
(d) A room in which the vestments are kept and parochial meetings are held.

Virgin's-bower
(a) A flowering plant, a species of clematis.
(b) In a wedding ceremony, an arch of flowers through which the bride enters.
(c) A hammock.
(d) A cool, unmolested nook.

Wafer-ash
(a) A thin disk of wood from which carriage washers are cut.
(b) A small green snake.
(c) In bakeries, refuse dough or crumbs.
(d) The hop-tree.

Waiver
(a) A flat ring of iron or leather between the nave of a wheel and the linchpin.
(b) One who waves.
(c) To be unsteady or undetermined.
(d) The voluntary relinquishment of a right.

Walk
(a) A stinging insect allied to the hornet.
(b) A body of civil officers for preserving order, etc.
(c) The primitive method of locomotion.
(d) To put on.

Watcher
(a) A very small watch.
(b) One who observes attentively, etc.
(c) A bobolink.
(d) A spool or reel.

Water
(a) A knife used by Igorrotes.
(b) A common liquid compound of hydrogen and oxygen.
(c) Concrete.
(d) To forgive.

Wauble
(a) A worthless toy.
(b) To cause to sway unsteadily.
(c) A weapon used by the Siamese.
(d) Existing only in name.

Weel
(a) A fish-trap made of twigs and rushes.
(b) A shrub bearing edible red berries.
(c) A sea duck sought for its down.
(d) A donkey.

Weight
(a) Buoyancy.
(b) Downward pressure due to gravity.
(c) A point or horn.
(d) To postpone action.

Wheatear
(a) A tear shed in anger.
(b) A furze-bush.
(c) A bird found in northern lands.
(d) The rice-bird.

White
(a) Having a light shade or color.
(b) Absence of light.
(c) Lovely.
(d) To shave closely.

Will
(a) Any striped cat.
(b) To exercise the faculty of volition.
(c) A trail.
(d) Vagrant.

Wind
(a) To stamp.
(b) Flight.
(c) A current of air.
(d) To shrink.

Woodcut
(a) Corded wood.
(b) An animal closely allied to the groundhog.
(c) A road through a dense forest.
(d) A wood-engraving.

Word-coinage
(a) Slang.
(b) The practice of inventing words for special occasions.
(c) Classification of words.
(d) State of being precise in speech.

Workless
(a) Useless.
(b) Female beetle.
(c) Wife of an Ethiopion army officer.
(d) Having no work.

Wreckage
(a) Infusion of malt before fermentation.
(b) Material from a wreck.
(c) A twisting or sprain.
(d) Act of preventing the transmission of a cablegram.

Yell
(a) Xanthine.
(b) A sharp, loud, inarticulate cry.
(c) To expostulate.
(d) Proverbial.

Zincous
(a) Soft.
(b) Pertaining to zinc.
(c) Impudent.
(d) An etching on a zinc plate.

Zootic
(a) In confusion.
(b) Pertaining to the zoo.
(c) Containing evidences of former life.
(d) Hallelujah.

KEY TO LABORATORY TEST SHEET A.

Aabec (c); absolute (c); accidental (d); actio (d); addressee (a); adjust (c); adroit (a); affect (b); aft (c); agglomerant (a); ahead (d); air (b); air-tight (a); alder (b); all (a); alternate (a); amalgamable (b); Americanism (d); amorrow (b); analog (b); ancestral (c); anemometer (b); angler (a); anti (d); antiparallel (c); anxious (b); apices (b); apprehensive (c); aqueous (b); architecture (a); areach (d); arm (d); arrant (b); artful (a); associate (d); atom (b); attorney-general (a); augury (c); authorized (a); ave (d); avow (c); Backwoods (b); bailee (c); bale (b); balsamous (a); bar (b); bargained (c); baronetage (b); baseball (d); bassoon (b); battening (a); baubling (a); bear (d); beechen (c); beholden (c); bellmouth (c); benefice (b); bereave (a); best (d); billing (d); black (a); blame (d); blemished (c); block (c); blubber (d); bolt (a); bone-cartilage (d); brachia (c); bran (d); breacher (a); breathable (b); bridgewater (b); brood (c); brush (c); buckish (d); build (a); burden (b); burro (a); bust (a); butler (b); by (b); Cable (c); calf (a); canage (d); canopy (a); cartilage (a); cast-iron (d); categorical (b); cathead (d); cavil (a); cella (a); center (d); certification (b); chain (d); chameleon (d); charge-sheet (a); chaste (c); chiasm (b); chimerize (d); chirpling(c); chromosphere(b); chuck(b); church(b); circumcision(a); citrous(c); clip(c); coak(c); cobby(a); cochineal(b); code(d); cogger(b); coin (d); colorable (a); compart (c); compelled (c); compositor (d); conception (b); conferential (b); congratulation (d); connivent (b); consist (b); constriction (d); continental (a); contralto (d); contribution (d); conviction (d); corn (a); corosif (c); countenance (a); coupled (d); cow (a); crank (d) creditability (a); crib (c); croche (b); cross (a); cruciferous (b); crystalliform (d); cupboard (c); current (b); customance (b); Da capo (a); daub (c); debate (d); decagon (b); declare (b); deeducational (d); deformation (a); deleble (a); demagogic (b); despite (b); desulphurize (c); diamond (d); dibasic (b); die (d); diminish (b); directness (a); discarnate (c); disclamation (c); diseased (c); dismayed (a); distinctive (b); diversiflorous (b); dock (d); dolphinet (a); double (d); downward (b); dressmaker (b); drone (a); dry (a); dunness (a); dyspepsia (c); Ear (b); earth (c); eccentric (c); educated (a); electricize (d); element (a); elk (c); embrace (c); enclad (c); engineered (b); enough (c); entity (b); equational (d); err (d); estately (b); ethize (d); every-day (d); executioner (a); expiatory (d); extrinsic (b); Fabler (b); fag (d); fall (a); fanciless (d); feathering (d); fellow-servant (d); ferment (a); fetch (b); fictitious (b); figurative (c); filose (c); finn (a); firedrake (a); fish (b); flag (a); flat (a); fleshen (b); floatingly (d); flowerage (c); flush (c); focusing (c); foraminifera (d); forefeel (d); form (d); fortify (b); Friday (c); frondivorous (c); functional (c); Garnet (b); gastronomic (d); gear (a); general (a); genty (b); george (a); ginger (c); glycerin (c); goatee (d); goggle (c); goldenback (b); good (c); goshawk (a); graine (b); granule (c); grass (a); grayback (d); greenable (b); grog (c); gross (b); grudge (d); gulfed (b); gun-reach (b); gymnospermae (a); Hammer (c); handless (b); hand-nut (c); harbored (c); harmonical (a); harvester (d); hazer (b); heart (b); helmeted (a); hemic (c); hemispheric (d); heretical (d); hierarchy (c); holler (c); honorable (d); horse-tamer (b); house (c); humiliant (d); hymnology (d); hypnotize (d); Ice (a); icy (c); idolater (a); imaginational (b); impaction (c); improperation (a); inaugural (d); includible

(b) ; incrustata (a) ; individualize (b) ; inebriate (a) ; infima (a) ; inform (d) ; infuriate (b) ; initiator (b) ; inoccupation (a) ; inset (c) ; instrumental (a) ; interested (c) ; intimidation (b) ; invariant (a) ; iron (d) ; irritable (a) ; isochronize (a) ; Jade (c) ; Jesuitic (b) ; jigger (b) ; jointage (c) ; jujube (b) ; Key (c) ; kick (b) ; king-bird (c) ; knight (b) ; knowingly (d) ; Lamented (a) ; lamp (d) ; land-tortoise (b) ; lanterned (b) ; large (c) ; latered (c) ; law (a) ; lay (b) ; leafage (d) ; leaven (a) ; leech (b) ; leonine (c) ; lessoned (c) ; levee (d) ; lie (b) ; light (b) ; lilyfy (b) ; lines-man (c) ; link (c) ; liquorice (c) ; loche (a) ; loded (a) ; looked (b) ; lose (a) ; lovelily (a) ; lunge (b) ; Madder (d) ; magnesia (d) ; make (c) ; mammilla (d) ; mannikin (d) ; marketable (b) ; masquerade (d) ; mat-rush (d) ; mavis (a) ; may (d) ; measure (d) ; memorative (a) ; mesozoa (c) ; metrical (b) ; micrology (c) ; midwinter (d) ; mill (a) ; mind (b) ; minotaur (d) ; missy (b) ; mitral (a) ; modiste (b) ; monodactyl (c) ; mons (a) ; moor-coot(b) ; mortifiedness(b) ; motioned(c) ; mountain(d) ; mowing(a) ; mummy (c) ; muscle (a) ; muskrat (b) ; mutter (a) ; Necessary (b) ; neglect (b) ; nervule (c) ; nightcap (a) ; nobodyness (c) ; northeast (c) ; nothingly (d) ; nursedom (c) ; Oak-tanned (c) ; obligancy (b) ; octa-pody (b) ; on (a) ; oratorical (a) ; order (b) ; ornamental (c) ; ostentatious (a) ; outscout(d) ; overflow(b) ; oviducal(a) ; Packery(a) ; pageant(a) ; painstaking (d) ; paper-faced (c) ; paraphernalia (d) ; partial (b) ; pass (b) ; pastoral (b) ; pea-comb (a) ; pectoral (b) ; peeped (c) ; pelviform (d) ; pennate (b) ; perimeter (d) ; perling (b) ; persist (b) ; Phi Beta Kappa (a) ; pickle (b) ; pigeon-English (c) ; pine (c) ; pipe (d) ; piu (c) ; plain (b) ; plane (c) ; planting-ground (c) ; Platonist (d) ; plot (c) ; plume (c) ; pneumatical (a) ; poisoned (c) ; policeman (b) ; pollen (c) ; polyangular (a) ; pond-pine (a) ; popper (a) ; port (c) ; positional (c) ; potent (c) ; precent (d) ; prefecture (a) ; prepended (d) ; presidencia (c) ; pretext (b) ; primary (b) ; print (c) ; privative (b) ; processal (b) ; professorate (c) ; projectable (c) ; proliferation (a) ; proofy (d) ; prudish (c) ; puffed (a) ; puma (c) ; pupilage (d) ; Quarter (d) ; queened (c) ; quietant (b) ; Race (d) ; radial (a) ; rail-snipe (b) ; rate (a) ; ravished (b) ; reader (a) ; recall (b) ; reconcile (a) ; red (a) ; redskin (c) ; reformer (a) ; relaxed (c) ; remittance (b) ; repel (d) ; retentive (a) ; returnable (b) ; reviver (b) ; rhetoricate (d) ; ridge (b) ; rily (b) ; rippling (a) ; roast (a) ; roman (b) ; roofer (b) ; rootage (b) ; rough (a) ; rueful (d) ; run (d) ; Sahib (a) ; salable (b) ; sand-blast (a) ; sauce (c) ; scalp (d) ; scatteration (d) ; scratch (b) ; scythe-hook (a) ; secondary (c) ; seditious (b) ; seizing (c) ; self-assumed (b) ; self-possession (d) ; semioval (d) ; sensitive (b) ; serpent (d) ; sessional (d) ; shack (b) ; sham (b) ; sheep (c) ; sheet (c) ; shipshape (a) ; shoot (b) ; shoulder-blade (d) ; shunt (a) ; side (b) ; silly (d) ; simul-taneity (b) ; singular (d) ; sitting (b) ; sky-blue (b) ; sled (b) ; slip (c) ; slur (c) ; smoke-stack (c) ; snarl (b) ; social (a) ; socket (a) ; sole (a) ; sound (b) ; spaceful (d) ; specificity (c) ; speech (c) ; spice-tree (c) ; spirit-ally (d) ; split (d) ; sport (d) ; sprinkle (b) ; square (c) ; stableman (d) ; stale (d) ; stare (b) ; statics (d) ; stint (a) ; stopped (a) ; strain (b) ; streamful (b) ; striker (a) ; structureless (a) ; subprincipal (d) ; sulk (d) ; sundered (c) ; supreme (b) ; surmise (a) ; surveyance (c) ; sweepage (b) ; syllogistic (c) ; Table (c) ; taedium (b) ; take-all (d) ; tally (c) ; tamboura (a) ; tap (b) ; tarpon (d) ; tauten (d) ; tearful (a) ; telegraphist (d) ; temper (d) ; terse (a) ; themselves (c) ; thermalgesia (b) ; thorax (b) ; three (d) ; thumb-band (a) ; ticketing (b) ; time (d) ; timothy (b) ; tire-smith (a) ; tobacco (b) ; tote (a) ; townward (b) ; tradition (c) ; trans-audient (c) ; transitable (d) ; transmutationist (a) ; treescape (c) ; trifler (a) ; trip (b) ; trouble (a) ; truss (c) ; tumble (b) ; twitteration (b) ; Unobserving (a) ; undershot (c) ; unicity (c) ; unit (c) ; Unitarian (d) ; unpurse (c) ; up-hill (b) ; urgency (b) ; uterus (a) ; Vaginant (b) ; value (c) ; variable (a) ; vault (d) ; velveted (b) ; venticular (a) ; vest (a) ; virgin's-bower(a) ; Wafer-ash(d) ; waiver(d) ; walk(c) ; watcher(b) ; water (b) ; wauble (b) ; weel (a) ; weight (b) ; wheatear (c) ; white (a) ; will (b) ; wind (c) ; woodcut (d) ; word-coinage (b) ; workless (d) ; wreck-age (b) ; Yell (b) ; Zincous (b) ; zootic (c).

LABORATORY TEST SHEET B.

Give a working definition for each of the following words with which you are familiar:

Abbozzo
Abderian
Ablegate
Acadialite
Acemetic
Acinaces
Acroke
Acuate
Aedicula
Agraph
Albaras
Algesia
Allomorphite
Almemar
Amelification
Ametropia
Ampycidae
Anisocnemic
Anomatheca
Antennaria
Anthrax
Aposthia
Applanation
Arca
Argentamid
Arundo
Ash-cat
Asplenium
Astragalocalcaneum
Athanatism
Atrichiidae
Austrium
Ayme
Babul
Bagaty
Banie
Baya
Beauvais's disease
Bezique
Bicessis
Biduous
Biradial
Bischofite
B'nai B'rith
Boeotian
Boongary
Boschveld
Boucherism
Bowdlerize
Breedling
Briza
Bulnbuln
Cadus
Calata
Calocub
Cameloidea
Canin
Cantharic
Capischolus
Capulincillo
Carcinoma
Carinate
Carper
Casern
Cataphract
Caucho
Cerasite
Chanterelle
Charadriidae
Checkle
Chermes
Choil
Chorionitis
Cinchonales
Claribella
Clavo
Clepe
Cloue
Colchicum
Colletic
Comatula
Commandancia
Commoration
Cond
Copaiye-wood
Coral-tree
Corsie
Cotgare
Craiget
Cuitikins
Cumming
Cyclamose
Cyperus
Damajavag
Dap
Dead-angle
Demot
Deoperculate
Derasha
Desiderate
Deversoir
Diabantite
Digeny
Diphenylene
Disquisition
Dogger

Doon
Doseh
Dravite
Dugon
Dutton's disease
Ecphysis
Eggeba
Elaeagnaceae
Emaunche
Emendation
Empleomania
Endorachis
Eosphorite
Epicyemate
Episkeletal
Epulosis
Eranos
Eschynite
Eugenolate
Eutaxiology
Excamb
Excogitable
Exomion
Exsiliency
Farraginous
Fatiscence
Fisk
Fontange
Fores
Foune
Foxing
Frankeniaceae
Freet
Fuchsinophil
Fulminic
Furodiazole
Gabella
Galago
Gallobromol
Gandi
Genoblast
Geromarasmus
Gibbon
Glacialin
Glauberite
Glonoin
Gra
Grimp
Gubernaculum
Hachis
Hairbranch-tree
Halisteresis
Hauture
Heberden's disease
Heilaman
Heptadecad
Heshwan
Heteroxanthin
Himation
Hirsel
Hobbledepoise
Hol
Holonarcosis
Homofocal
Hoplology
Horrisonous
Huck-muck
Hurlyhawkie
Hydnaceae
Hydropathic
Hypozeugma
Illaenus
Immissivity
Imphee
Indiadem
Intemperies
Interparoxysmal
Involucel
Iodidate
Itaka-wood
Iztli
Japish
Jeffersonite
Joanese
Joyance
Jurdon
Kadosh
Kanari
Kava
Kene
Kiku
Kitcat
Korora
Kutch
Labyrinthula
Lacunule
Lakao
Lauk
Legabile
Lek
Libelluline
Lincture
Litiscontestation
Llume
Loller
Lubricous
Lucken
Lych
Lysodactylae
Machineel
Mahogo
Malengine
Manege
Maori-head
Margelidae
Marshite
Matachin
Mechal
Meconioid
Medusome
Melasmic
Mephistophelian
Merocoxalgia
Metalammonium
Metamorphist
Methanal
Mischanter
Mkungu
Molet
Monethyl
Morgen

Moup
Mulet
Myristicivorous
Nacarat
Nanmu
Nark
Nasion
Naukar
Neo-Pythagorean
Neurula
Niblick
Nither
Noeggerathia
Noningerence
Nuciferous
Obumbrant
Odize
Oecological
Ogee
Oilet
Olinia
Oolak
Ophileta
Opsonin
Oreodontidae
Organacidia
Ortygan
Ouf
Oxytone
Paleophysiology
Palmetum
Pancoline
Panotype
Paradenitis
Paresoanalgesia
Paroissien
Patrice
Paviser
Pentatrematoid
Pepinillo
Peregrinate
Pesade
Petronel
Pharaon
Phlogogenous
Phorometer
Phosphoryl
Phronetal
Physiotype
Pilocystic
Pisum
Pleiad
Poffle
Polyphonism
Posticum
Poundal
Praetergum
Preabdomen
Propositum
Protactic
Prototypal
Pseudoscorpiones
Pteropaedes
Pundigrion
Pursuivant
Pylorus
Pyrrodiazole
Quadrumanous
Quitantie
Radiobe
Rammelsbergite
Raoulia
Ree
Regnarok
Reps
Residencia
Respondentia
Rhyparia
Rockweed
Roseolae
Roxy
Russium
Sabeca
Sacrosanct
Saintpaulia
Salpicon
Samech
Santon
Sargo
Saxhorn
Schisma
Schoenus
Scirenga
Scorkle
Scronach
Sealwort
Septuncial
Seu
Shealing
She-sole
Signa
Sinophile
Skiamachy
Snucks
Somatology
Sopsavine
Sparpil
Sphaerosiderite
Spike-team
Stanhope
Staumrel
Steem
Stephoidea
Stibonium
Stomacephalus
Sturnidae
Subelaphine
Succedaneous
Suffumige
Superoccipital
Swallowwort
Swinge
Synaptase
Syntypic
Tenebrio
Terebra
Tetradon
Thallome
Thienone
Tilefish
Tolosa-wood
Tonsure

Toran
Traveling-couvert
Triassic
Trivoltin
Tube-scaler
Tundra
Turkle
Tussemose
Tyrociny
Ululant
Uncharnel
Venust
Veronal
Vicontiel
Vincetoxicum
Vitellophag
Volapuk
Vorticidae
Wanigan
Warnestore
Weapon-salve
Wergild
Whincow
Whudder
Winebergite
Wireangle
Woaded
Wype
Yaip
Yorker
Zapote

For definitions to the above list see Funk and Wagnalls New Standard **Dictionary of the English Language,** 1916.

LABORATORY TEST SHEET C.

The following list represents one hundred words arranged in order of difficulty as determined by the test sheets used at Colorado College:

1. adjust
2. consist
3. tradition
4. authorized
5. unobserving
6. tumble
7. bereave
8. sham
9. sensitive
10. wreckage
11. associate
12. harbored
13. surmise
14. intimidation
15. addressee
16. artful
17. grudge
18. drone
19. stint
20. ahead
21. rate
22. urgency
23. perimeter
24. deformation
25. projectable
26. compelled
27. vault
28. adroit
29. spaceful
30. desulphurize
31. terse
32. augury
33. bone-cartilage
34. specificity
35. semioval
36. initiator
37. surveyance
38. decagon
39. rueful
40. simultaneity
41. mannikin
42. anti
43. functional
44. fabler
45. jointage
46. puma
47. apprehensive
48. memorative
49. disclamation
50. woodcut
51. deeducational
52. inebriate
53. anemometer
54. radial
55. apices
56. expiatory
57. contralto
58. jade
59. nothingly
60. extrinsic
61. tauten
62. shunt
63. hierarchy
64. forefeel
65. baronetage
66. dunness
67. lilyfy
68. seditious
69. agglomerant
70. battening
71. ave
72. transitable
73. creditability
74. analog
75. mavis
76. pennate
77. syllogistic
78. cruciferous
79. categorical
80. baubling
81. goshawk
82. chromosphere

83. monodactyl
84. processal
85. isochronize
86. prepended
87. cella
88. jujube
89. diversiflorous
90. loche
91. chimerize
92. nursedom
93. octapody
94. zootic
95. thermalgesia
96. actio
97. canage
98. graine
99. spiritally
100. aabec

It will readily be seen that the above list would be of very little value for testing any except college students and adults. A thoroughly adequate list of the nature of that suggested above would necessarily begin with the easiest words of infancy and would be applicable to any and all ages.

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